



Body Repairs

Fox 2004 ➤ , Fox 2010 ➤ , Fox 2014 ➤ ,
SpaceFox 2006 ➤ , SpaceFox 2011 ➤
Edition 06.2013

Protected by copyright. Copying for private use only.
Copyright Volkswagen AG.
The use of this document, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copying for private use only.



Repair Group overview for Body Repairs

Repair Group

- 00 - Technical data
- 50 - Body - front
- 51 - Body - centre
- 53 - Body - rear



Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

All rights reserved.
No reproduction without prior agreement from publisher.



Contents

00 - Technical data	1
1 Vehicle identification data	1
1.1 Vehicle identification number	1
1.2 Chassis number - anti-corrosion protection	1
1.3 Destructive labels (only for Brazil) - VIS	1
1.4 Destructible labels (only for Brazil) - VIS - replacement	3
1.5 Identification plate (exclusive for European market)	3
1.6 Vehicle identification tag	4
2 Foam part/support	5
3 Zinc-coated body parts	9
4 High-resistance body plate	10
5 Laser welding	12
6 Body clearance dimensions	13
6.1 Front body section	13
6.2 Rear body section	19
7 Body dimensions	36
7.1 Body - front section	36
7.2 Body - central section	40
7.3 Body - rear section	48
7.4 Body - lower front section	52
7.5 Body - lower central section	56
7.6 Body - lower rear section	57
8 Alignment platform	61
8.1 Overview	61
8.2 General view of the front section alignment platform positions	63
8.3 General view of the central section alignment platform positions	67
8.4 General view of the rear section alignment platform positions	68
50 - Body - front	72
1 Engine support (right side) - replace	72
1.1 Tools	72
1.2 Remove	72
1.3 Install	73
2 Suspension shims (Crossfox ➤ 05.13 and Space Cross / Suran Cross) - replace	75
2.1 Tools	75
2.2 Remove	75
2.3 Install	76
3 Auxiliary frame support - replace	78
3.1 Tools	78
3.2 Remove	78
3.3 Install	79
4 Wheel arch upper longitudinal member - replace	81
4.1 Tools	81
4.2 Remove	81
4.3 Install	83
5 Wheel arch upper longitudinal member reinforcement - replace	85
5.1 Tools	85
5.2 Remove	85
5.3 Install	87
6 Front wheel arch - replace	89
6.1 Tools	89



6.2	Remove	89
6.3	Install	90
7	Front wheel arch (partial part) - replace	92
7.1	Tools	92
7.2	Remove	92
7.3	Install	93
8	Auxiliary frame support thread - repair	95
8.1	Tools	96
8.2	Thread repair	97
9	Front longitudinal member - replace	100
9.1	Tools	100
9.2	Remove	100
9.3	Install	101
10	Front longitudinal member (partial part) - replace	103
10.1	Tools	103
10.2	Remove	103
10.3	Install	104
11	Front bumper support - replace	107
11.1	Tools	107
11.2	Remove	107
11.3	Install	109
51	- Body - centre	111
1	Roof (with and without sunroof - replace)	111
1.1	Tools	111
1.2	Remove	111
1.3	Install	113
2	Roof (Spacefox) - replace	123
2.1	Tools	123
2.2	Remove	123
2.3	Install	125
3	Front roof cross member - replace	135
3.1	Tools	135
3.2	Remove	135
3.3	Install	136
4	Central roof cross member - replace	138
4.1	Tools	138
4.2	Remove	138
4.3	Install	139
5	Rear roof cross member (Fox) - replace	141
5.1	Tools	141
5.2	Remove	141
5.3	Install	143
6	Rear roof cross member (Spacefox) - replace	145
6.1	Tools	145
6.2	Remove	145
6.3	Install	147
7	A-pillar (external section) - replace	150
7.1	Tools	150
7.2	Remove	150
7.3	Install	152
8	A-pillar (internal section) - replace	155
8.1	Remove	155
8.2	Install	157



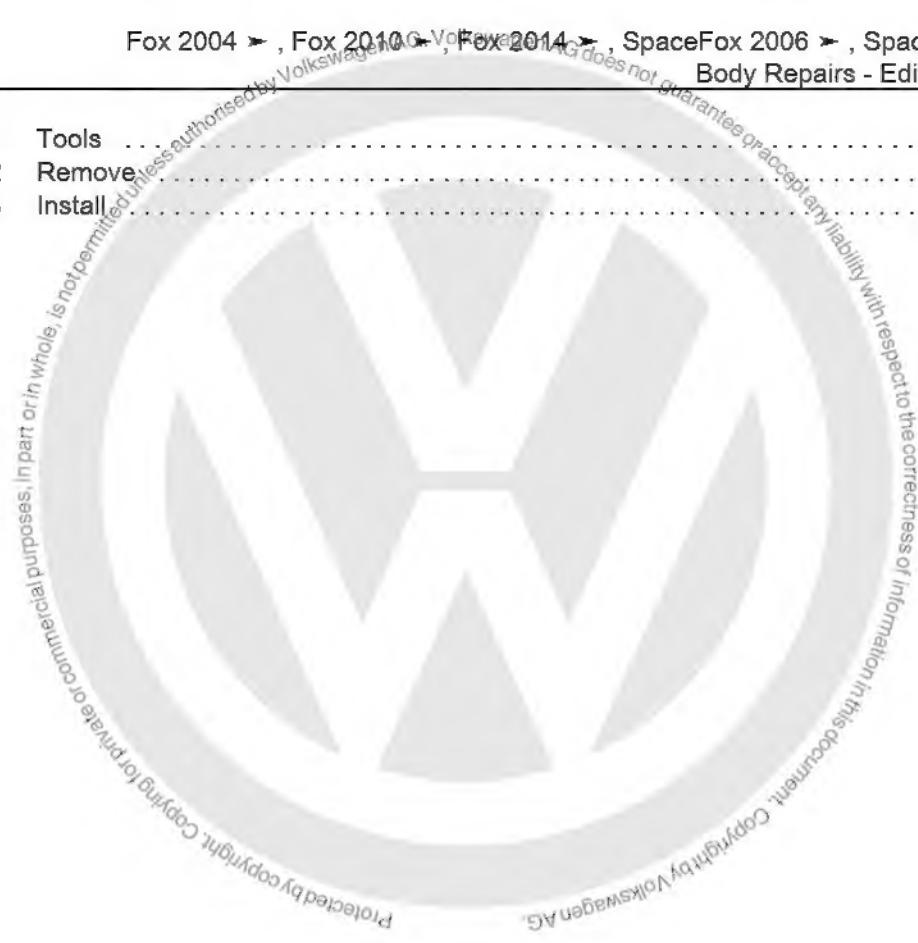
9	B-pillar (4 doors - external section) - replace	160
9.1	Tools	160
9.2	Remove	160
9.3	Install	162
10	B-pillar (2 doors - internal section) - replace	164
10.1	Tools	164
10.2	Remove	164
10.3	Install	166
11	B-pillar (4 doors - internal section) - replace	169
11.1	Tools	169
11.2	Remove	169
11.3	Install	171
12	Lower longitudinal member (2 doors - external section) - replace	173
12.1	Tools	173
12.2	Remove	173
12.3	Install	175
13	Lower longitudinal member reinforcement (2 doors) - replace	177
13.1	Tools	177
13.2	Remove	177
13.3	Install	179
14	Lower longitudinal member (4 doors - external section) - replace	181
14.1	Tools	181
14.2	Remove	181
14.3	Install	183
15	Front floor - partial part - replace	186
15.1	Tools	186
15.2	Remove	186
15.3	Install	189
16	Lower longitudinal member reinforcement (4 doors) - replace	192
16.1	Tools	192
16.2	Remove	192
16.3	Install	193
53 - Body - rear		196
1	Back panel (2 and 4-door Fox) - replace	196
1.1	Tools	196
1.2	Remove	196
1.3	Install	198
2	Back panel (Spacefox) - replace	203
2.1	Tools	203
2.2	Remove	203
2.3	Install	205
3	Rear cross member - replace	207
3.1	Tools	207
3.2	Remove	207
3.3	Install	209
4	Rear cross member - replace	210
4.1	Tools	210
4.2	Remove	210
4.3	Install	212
5	Tail light housing - replace	214
5.1	Tools	214
5.2	Remove	214
5.3	Install	216



6	Tail light housing (Spacefox) - replace	217
6.1	Tools	217
6.2	Remove	217
6.3	Install	219
7	Tow hook - replace	222
7.1	Tools	222
7.2	Remove	222
7.3	Install	223
8	Rear longitudinal member (Fox - partial part) - replace	225
8.1	Tools	225
8.2	Remove	225
8.3	Install	227
9	Rear longitudinal member (Spacefox - partial part) - replace	229
9.1	Tools	229
9.2	Remove	229
9.3	Install	231
10	External side panel (2 doors - partial part) - replace	235
10.1	Tools	235
10.2	Remove	235
10.3	Install	237
11	External side panel (4 doors - partial part) - replace	240
11.1	Tools	240
11.2	Remove	240
11.3	Install	242
12	External side panel (Spacefox - partial part) - replace	245
12.1	Tools	245
12.2	Remove	245
12.3	Install	247
13	Wheel arch (2 doors - external section) - replace	251
13.1	Tools	251
13.2	Remove	251
13.3	Install	253
14	Wheel arch (4 doors - external section) - replace	255
14.1	Tools	255
14.2	Remove	255
14.3	Install	257
15	Wheel arch (Spacefox - external section) - replace	259
15.1	Tools	259
15.2	Remove	259
15.3	Install	262
16	Spare wheel housing (Fox) - replace	265
16.1	Tools	265
16.2	Remove	265
16.3	Install	267
17	Spare wheel housing (Spacefox) - replace	269
17.1	Tools	269
17.2	Remove	269
17.3	Install	271
18	Spare wheel housing (partial part) - replace	274
18.1	Tools	274
18.2	Remove	274
18.3	Install	275
19	Spare wheel housing (Spacefox - partial part) - replace	277



19.1	Tools	277
19.2	Remove	277
19.3	Install	279







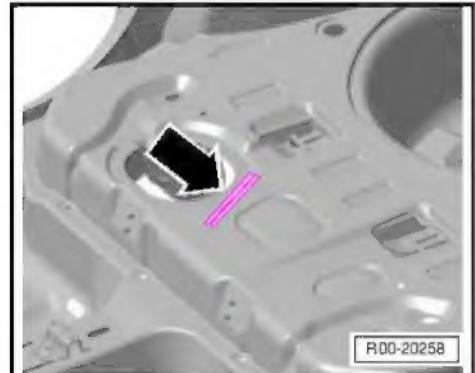
00 – Technical data

1 Vehicle identification data

(VKI000277; Edition 06.2013)

1.1 Vehicle identification number

The vehicle identification number (chassis number) -arrow- is engraved on the floor plate below the back seat. It becomes visible when the floor lining is lifted.



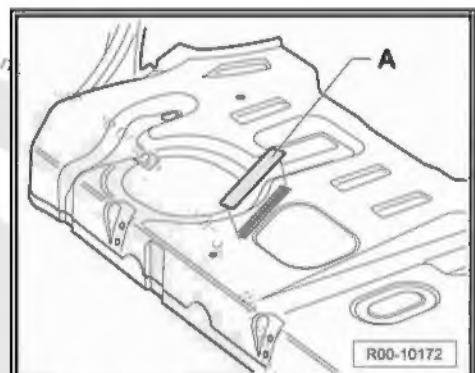
1.2 Chassis number - anti-corrosion protection

All the vehicles have, applied on the chassis number, a self-adhesive plastic film -A-.



WARNING

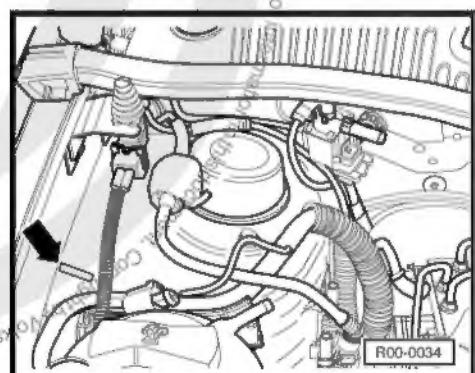
This plastic film has the purpose of preserving the integrity of the chassis number engraving. It has been developed so the prevent the relief copy of the number, which is required to prepare the vehicle or Insurance Company documents. Therefore, this film must be removed for this purpose. In case this film is damaged, replace it.



To install the plastic film - APS 295 000-, clean the film adhesion area with cleaning solution - D 009 401 04-. Rub the surface with a cloth until it is completely dry.

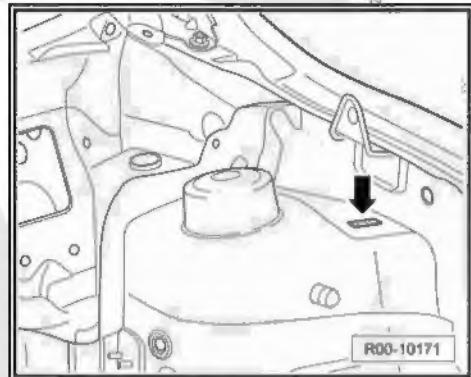
1.3 Destructive labels (only for Brazil) - VIS

The first VIS label -arrow- is placed over the right front suspension housing (► 84116407).

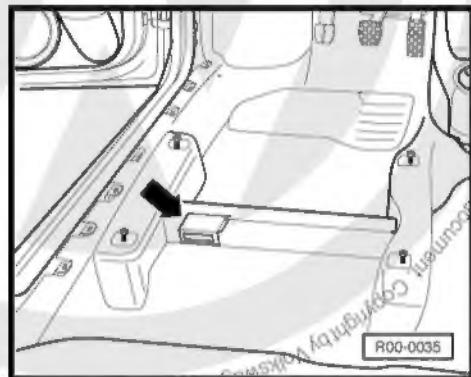




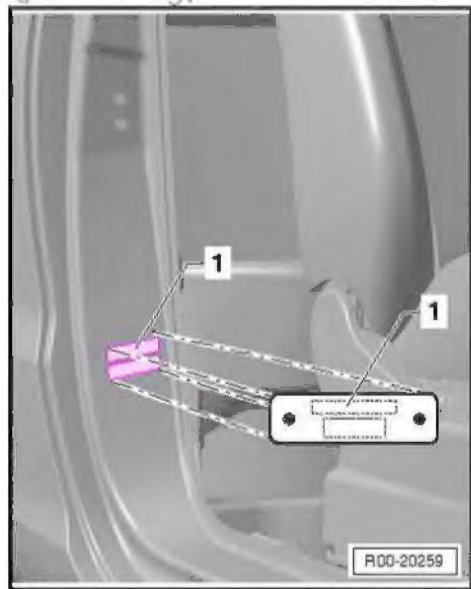
The first VIS label -arrow- is placed over the left front suspension housing (84116408 ➤).



The second VIS label -arrow- is on the left seat's cross member and is visible from the rear side through an opening in the floor lining.

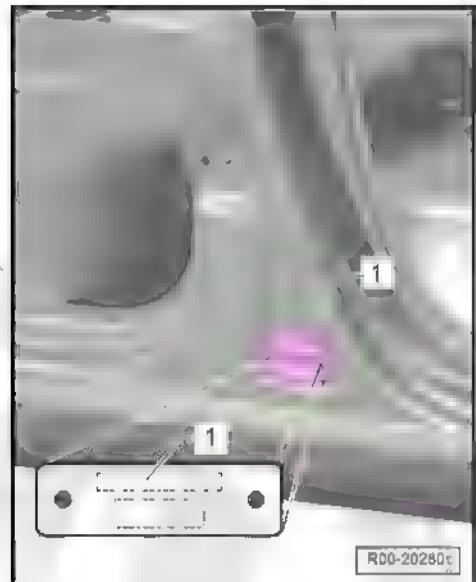


The third VIS label -arrow- is on the right B-pillar (2 doors). It becomes visible after the right front door is opened.





The third VIS label -arrow- is on the right B-pillar (4 doors). It becomes visible after the right front door is opened.



1.4 Destructible labels (only for Brazil) - VIS - replacement



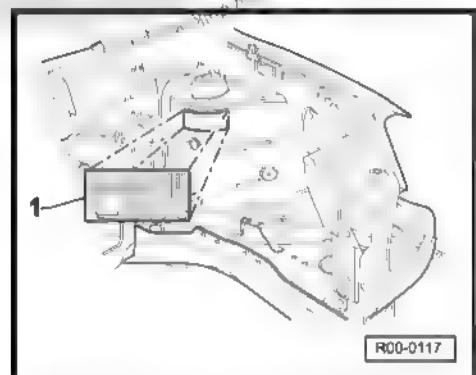
WARNING

These labels are valid only for the Brazilian market.

The destructible labels - VIS are only supplied exclusively to the governmental traffic-related bodies (Detrans / Ciretrans) or Security bodies (Police Station). See ➤ Memorandum number 98/09 of 06/16/2009 which deals with the subject.

1.5 Identification plate (exclusive for European market)

The vehicle identification plate -1- is fastened to the left side, suspension housing.





1.6 Vehicle identification tag

The vehicle ID tag -1- is located in the rear section, inside the spare wheel housing, on the left side, in the vehicle movement direction.





2 Foam part/support

Foam parts/supports are installed in several clearances in the body of this vehicle. Parts are made of foam (EVA - Ethylene-Vinyl-Acetate) with a self-adhesive surface. Supports are made of electro galvanized steel, have foam lips (EVA - Ethylene-Vinyl-Acetate) and are fixed by plastic clip.

These foam parts/supports enable reducing the transmission of noise from running within the vehicle.

The following figures display the location of these foam parts/supports on the body.

2-door Fox

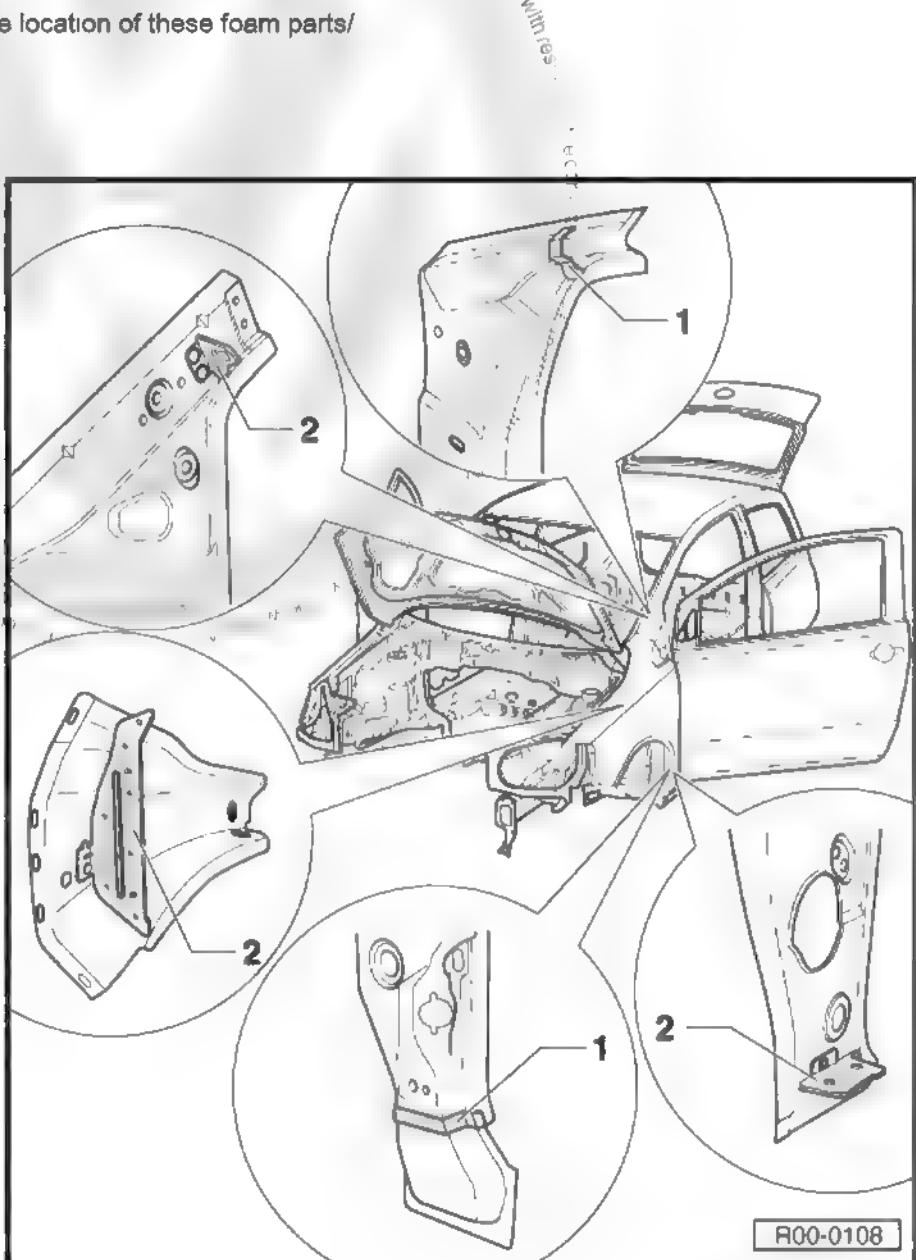
1 - Self-adhesive foam part

- EVA - Ethylene-Vinyl-Acetate

The original part expands at a temperature of 180°C. When repairing, use the D 506 KD1 A2 filling foam.

2 - Metallic support for foam

- Electro galvanized steel + EVA - Ethylene-Vinyl-Acetate





1 - Self-adhesive foam part

- EVA - Ethylene-Vinyl-Acetate
- The original part expands at a temperature of 180°C. When repairing, use the D 506 KD1 A2 filling foam.

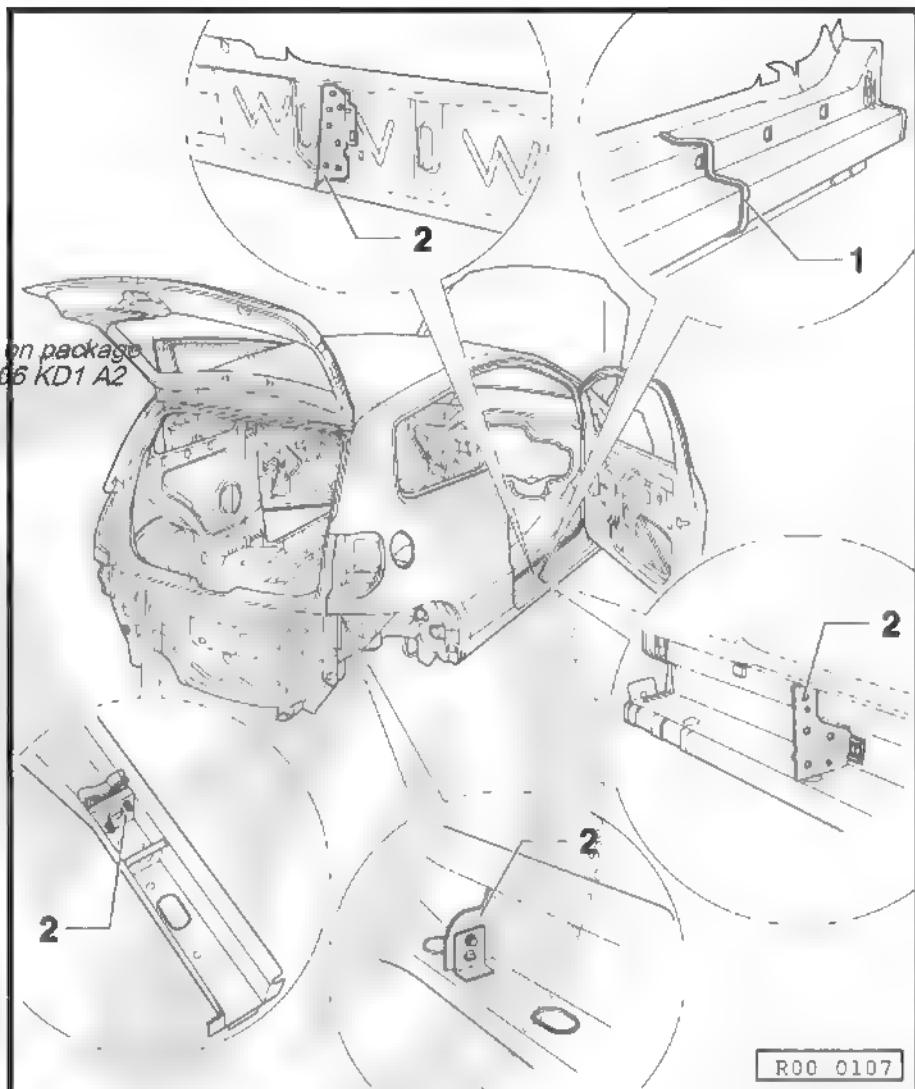


Note

Follow the instructions on package when applying the D 506 KD1 A2 filling foam.

2 - Metallic support for foam

- Electro galvanized steel + EVA Ethylene-Vinyl-Acetate



Note

These parts, as well as the supports, must be replaced after carrying out repairs in the area where they are installed, since sealing foams become permanently deformed.

4-door Fox and Spacefox



1 - Self-adhesive foam part

- EVA - Ethylene-Vinyl-Acetate
- The original part expands at a temperature of 180°C. When repairing, use the D 506 KD1 A2 filling foam.

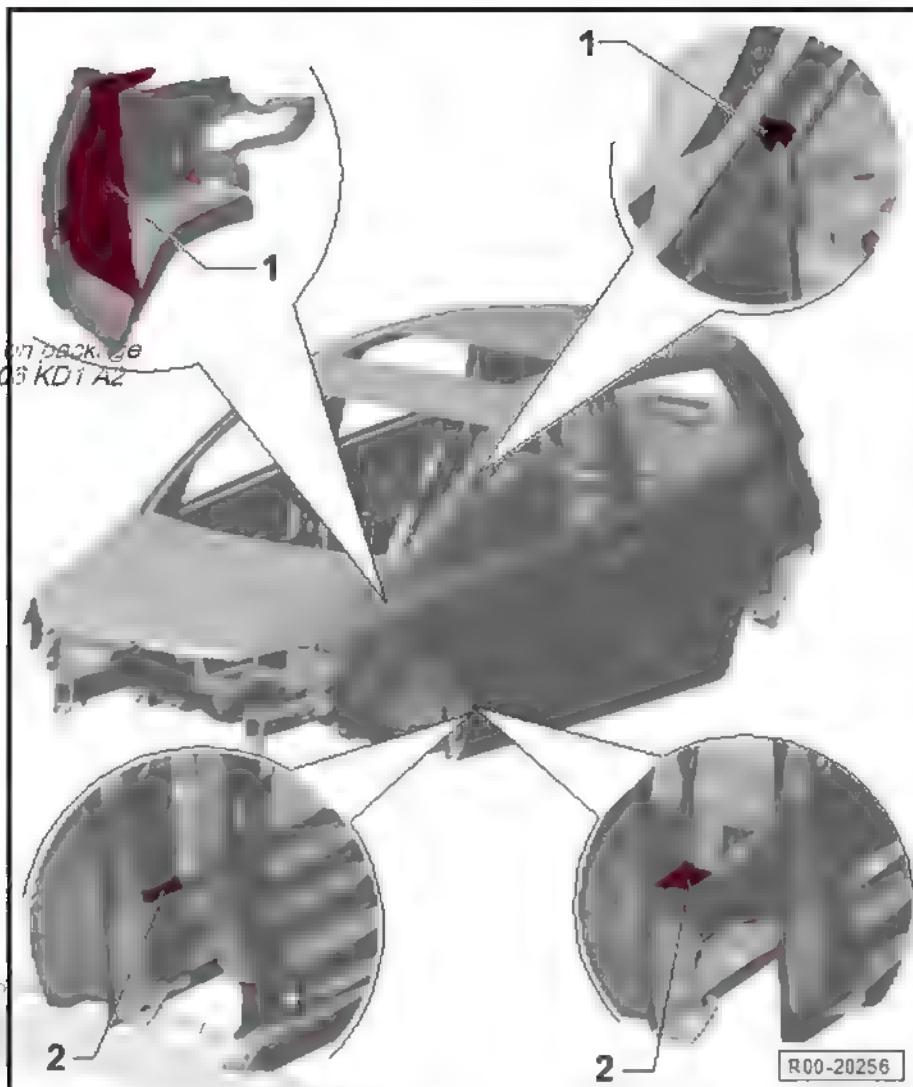


Note

Follow the instructions on back page when applying the D 506 KD1 A2 filling foam.

2 - Metallic support for foam

- Electro galvanized steel + EVA - Ethylene-Vinyl-Acetate





1 - Self-adhesive foam part

- EVA - Ethylene-Vinyl-Acetate
- The original part expands at a temperature of 180°C. When repairing, use the D 506 KD1 A2 filling foam.

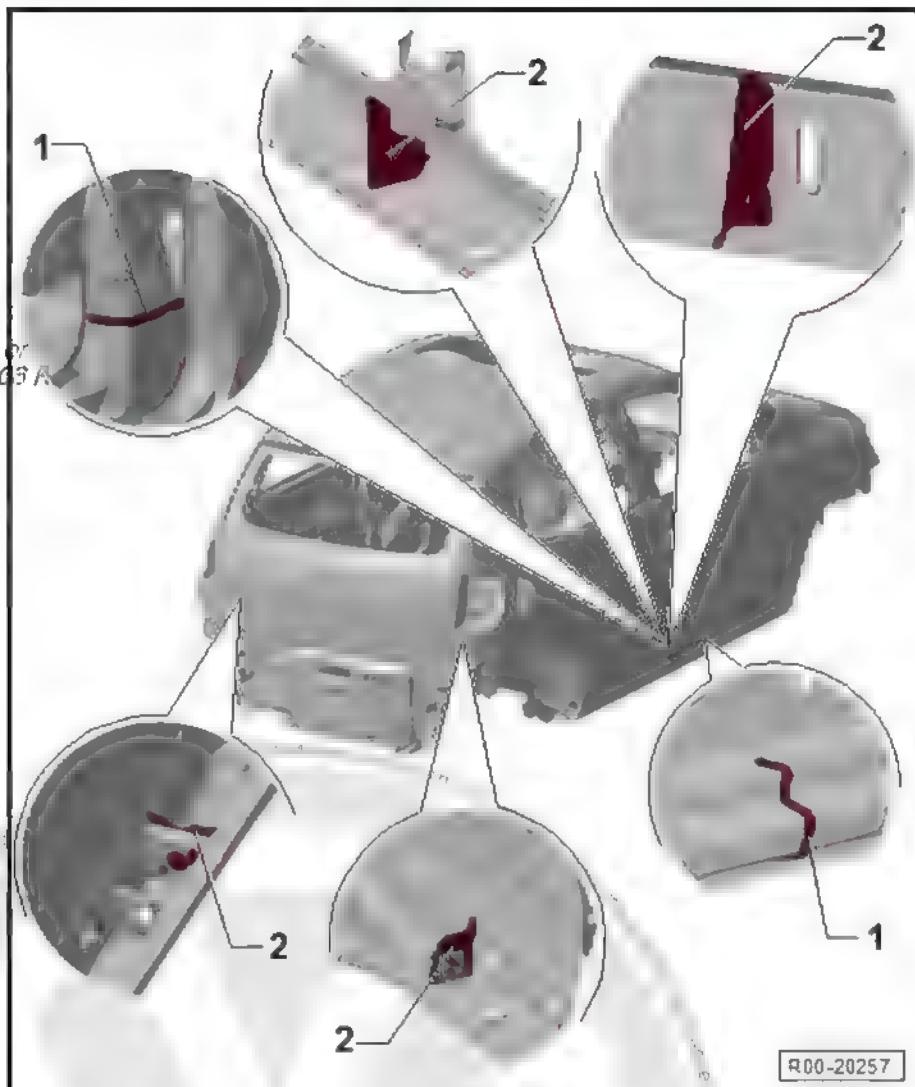


Note

Follow the instructions for when applying the D 506 A2 filling foam.

2 - Metallic support for foam

- Electro galvanized steel + EVA - Ethylene-Vinyl-Acetate





3 Zinc-coated body parts

The vehicle is built with 80% of the body plates zinc-coated on both sides!

Observe the following information before performing body repair works ➤ General Information, Body Repairs, General Body Repairs ; Work process



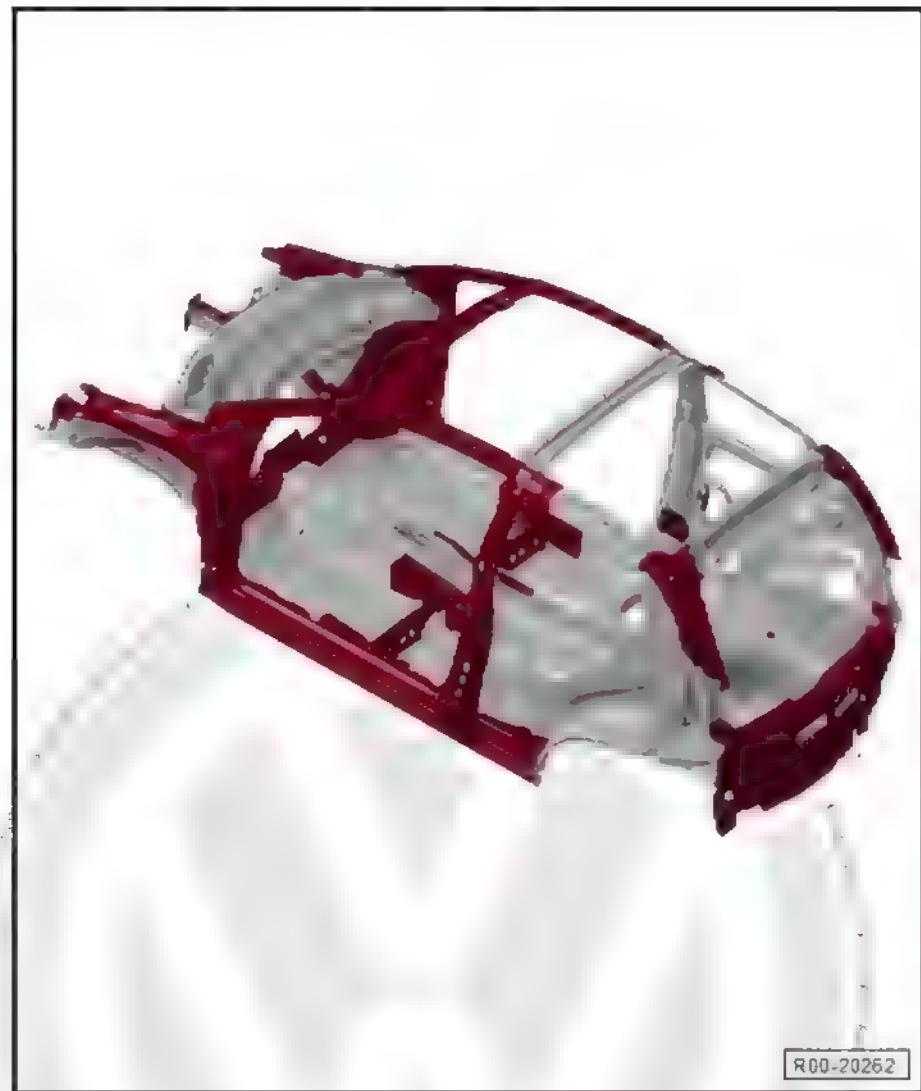


4 High-resistance body plate

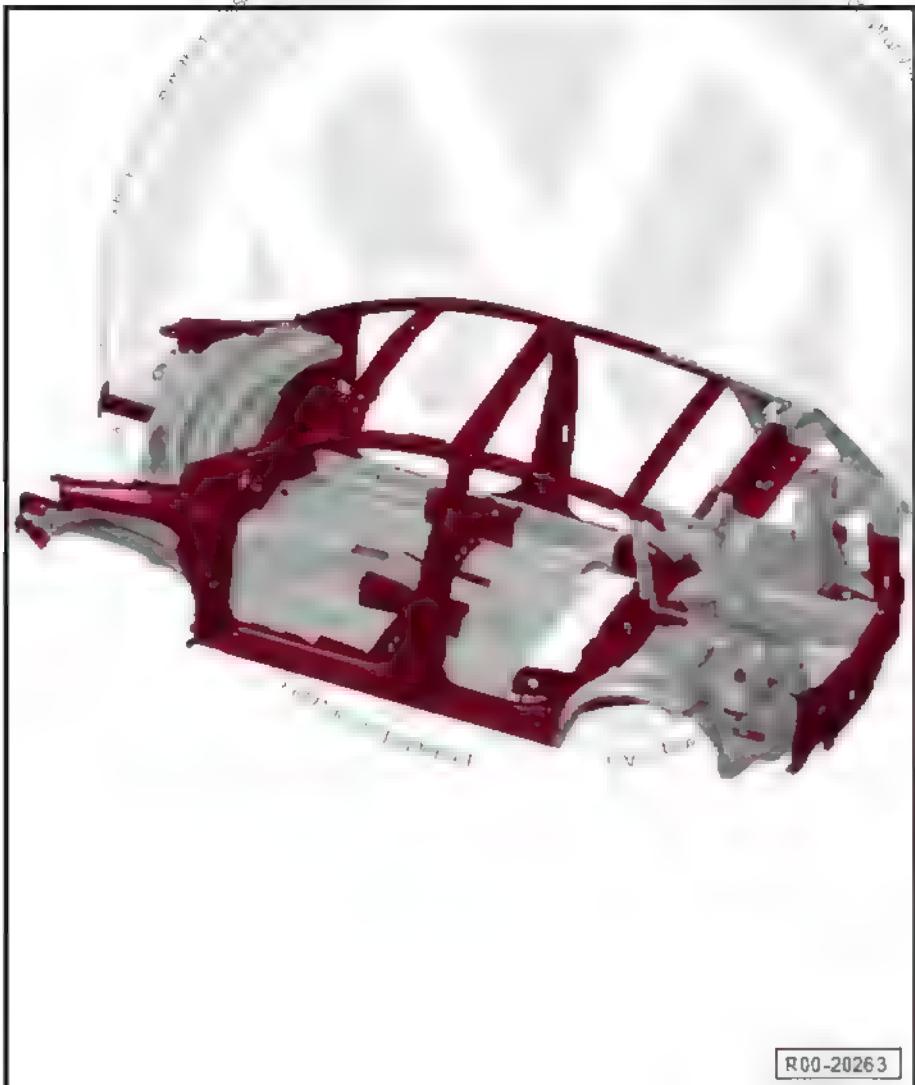
Work process with high-resistance body plates → General Information; Body Repairs, General Body Repairs ; Work process

High-resistance body plates are used on the following body areas:

2-door Fox



4-door Fox and Spacefox





5 Laser welding

The roof and body parts in this vehicle are laser welded

In laser welding, a high-energy light beam is driven onto the welding area through optical lenses and optical fibres.

In the welding process, the upper plate undergoes a complete fusion welding and the lower plate undergoes partial fusion welding, without adding material

During repairs, the laser weld beads (even in roof repairs) are replaced by Mig SG welding spots and RP resistance welding spots.

Roof replacement.



6 Body clearance dimensions

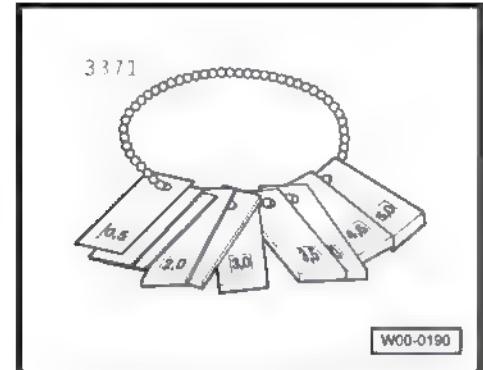
6.1 Front body section

6.1.1 Fox



Note

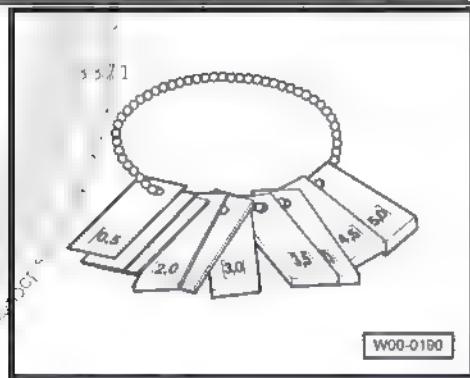
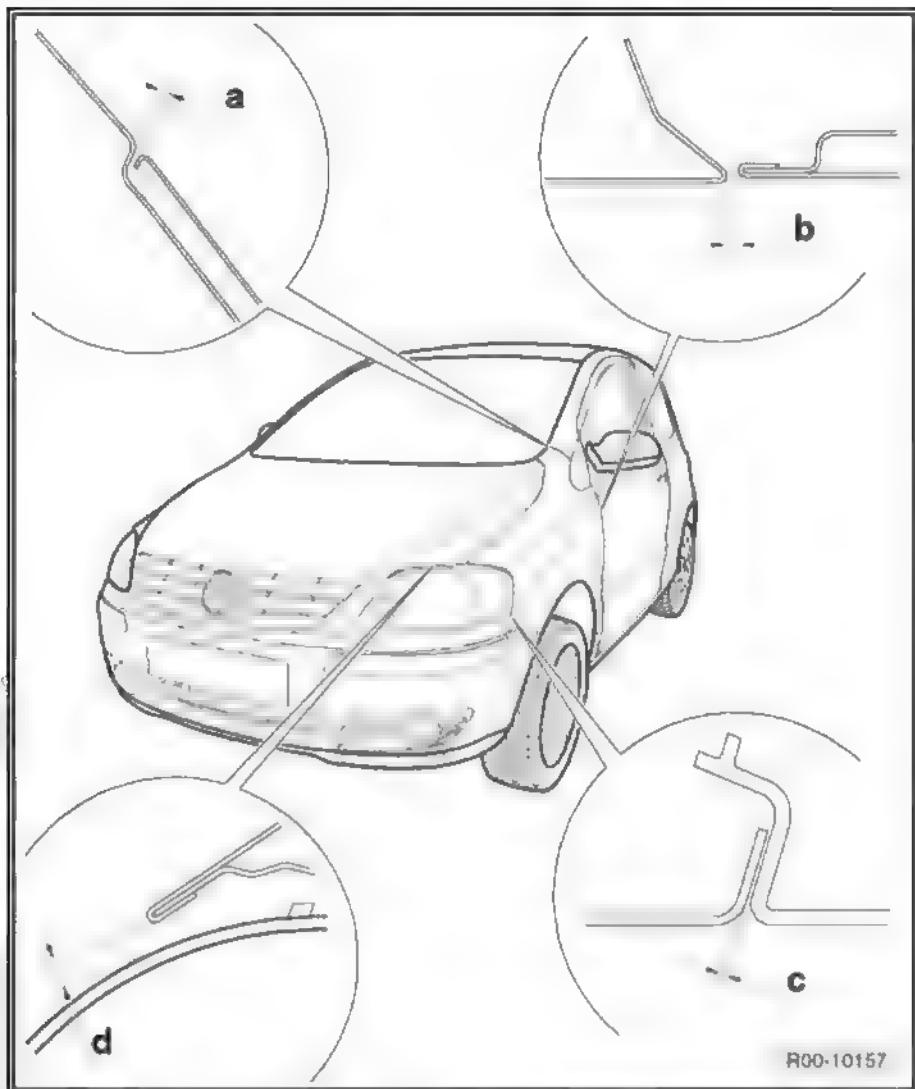
Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.



Note

Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.



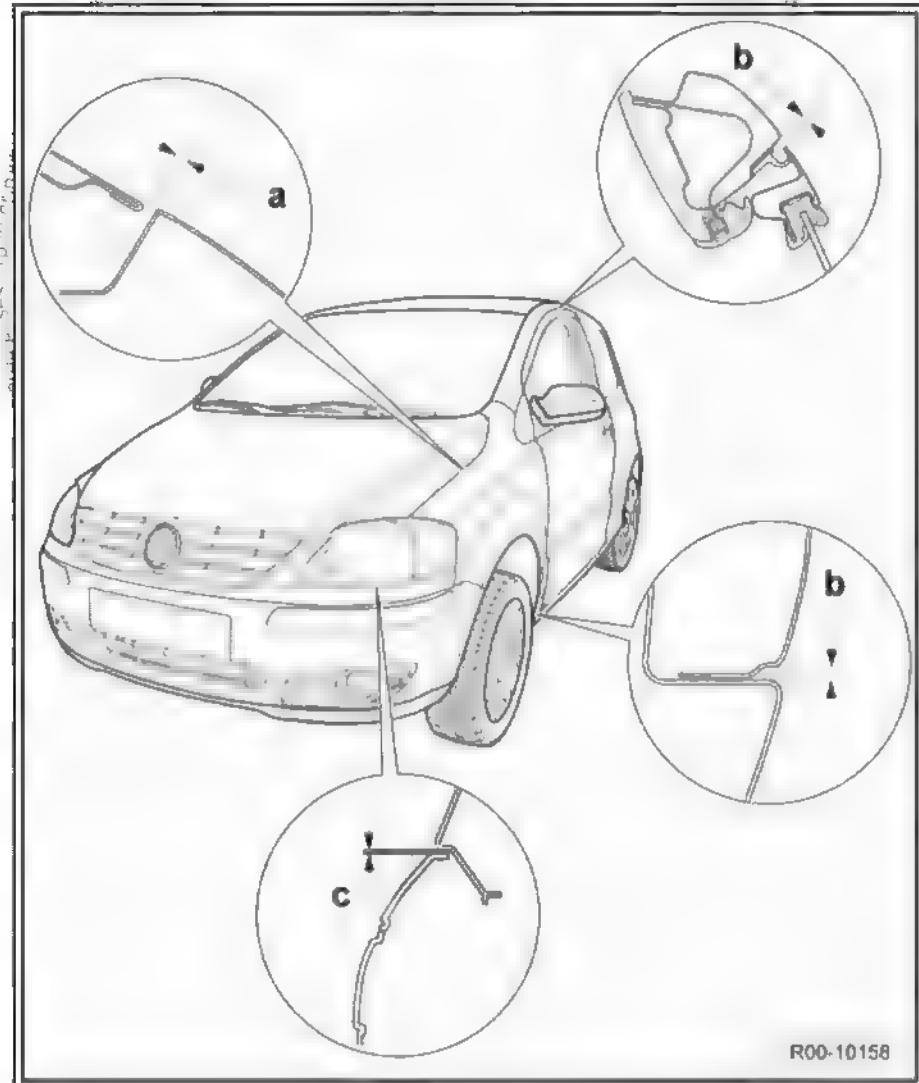


Dimension-a - 2.0 mm \pm 1 mm

Dimension-b - 3.5 mm \pm 1 mm

Dimension -c - 4.5 mm \pm 1 mm

Dimension -d- 1.0 mm \pm 1 mm



Dimension-a - - 3.5 mm \pm 1 mm

Dimension-b - - 4.5 mm \pm 1 mm

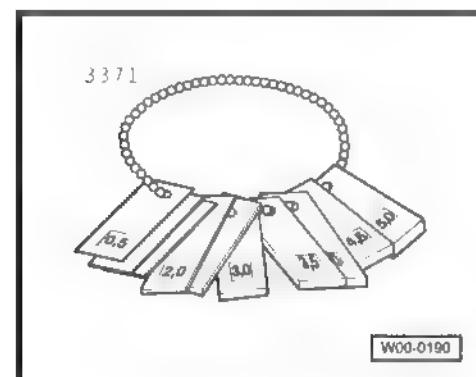
Dimension -c- - 2.0 mm \pm 0.5 mm

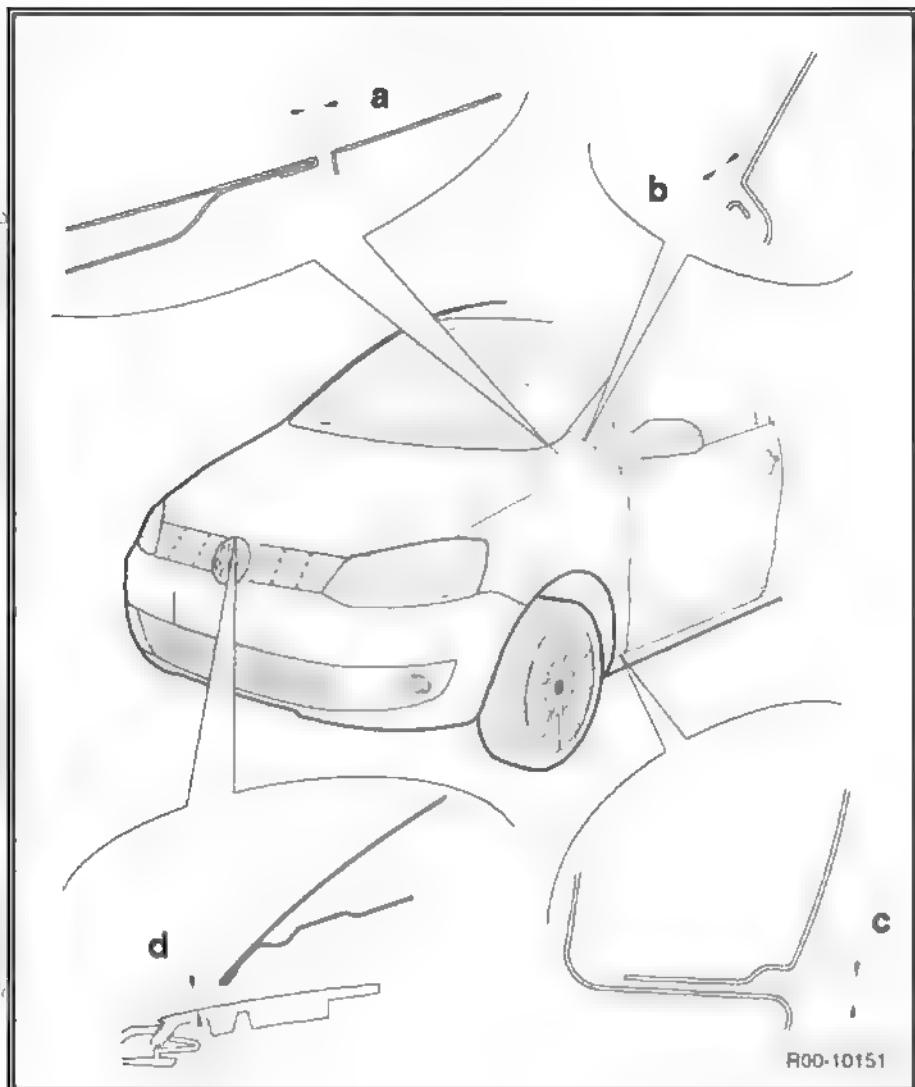
6.1.2 New Fox and New Spacefox



Note

Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.



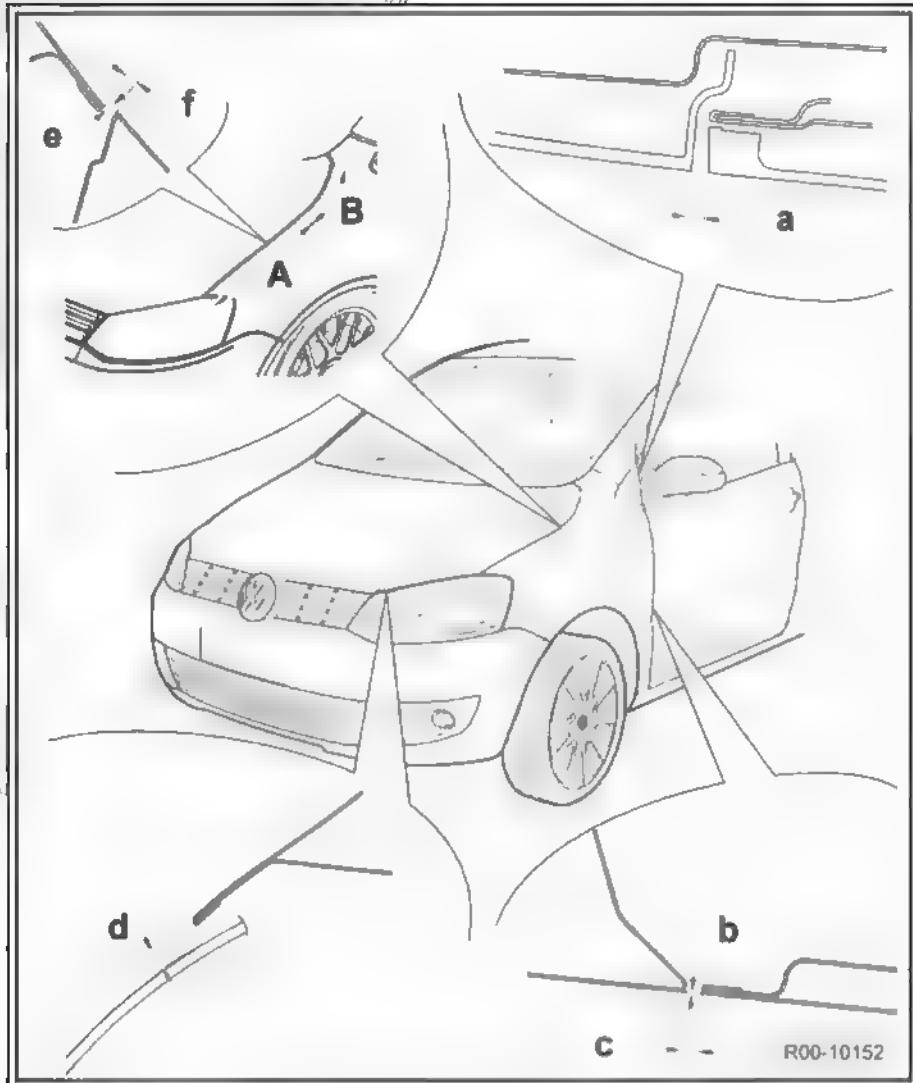


Dimension-a - $3.0 \text{ mm} \pm 0.5 \text{ mm}$

Dimension-b - $2.0 \text{ mm} \pm 1 \text{ mm}$

Dimension -c- - $5.0 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -d- - $4.0 \text{ mm} \pm 0.5 \text{ mm}$



Dimension-a - $3.5 \text{ mm} \pm 0.5 \text{ mm}$

Dimension-b - $0 \text{ mm} + 1 \text{ mm}$

Dimension -c- - $3.5 \text{ mm} \pm 0.5 \text{ mm}$

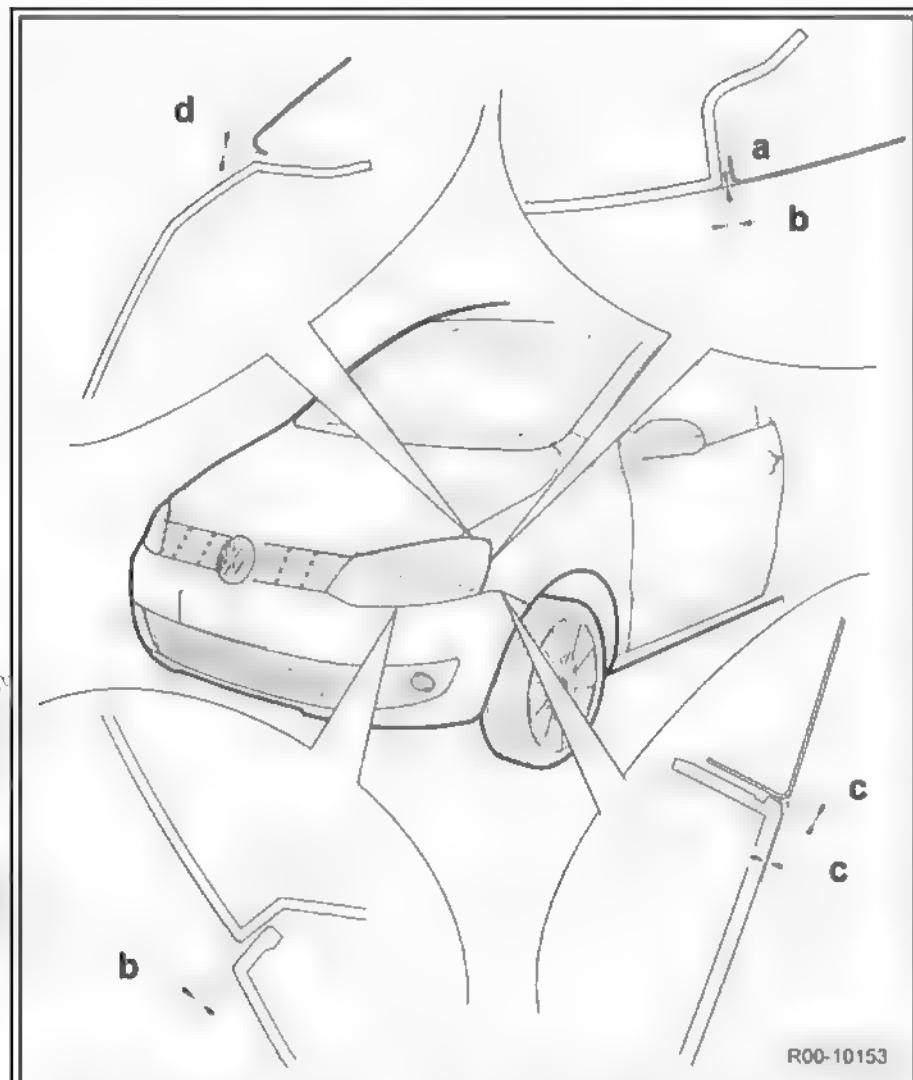
Dimension -d- - $5.0 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -e-

- Region A - $1.0 \text{ mm} \text{ to } 1.7 \text{ mm} \pm 0.5 \text{ mm}$
- Region B - $1.7 \text{ mm} \text{ to } 0.0 \text{ mm} \pm 0.5 \text{ mm}$

Dimension-f-

- Region A - $3.2 \text{ mm} \pm 0.5 \text{ mm}$
- Region B - $3.2 \text{ mm} \text{ to } 3.0 \text{ mm} \pm 0.5 \text{ mm}$





Dimension-a - 0 mm ± 0.5 mm

Dimension-b - 2.0 mm ± 0.5 mm

Dimension -c- 0 mm ± 0.5 mm

Dimension -d- 5.0 mm ± 0.5 mm

6.2 Rear body section

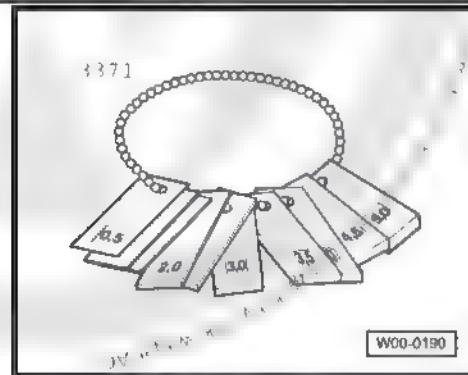
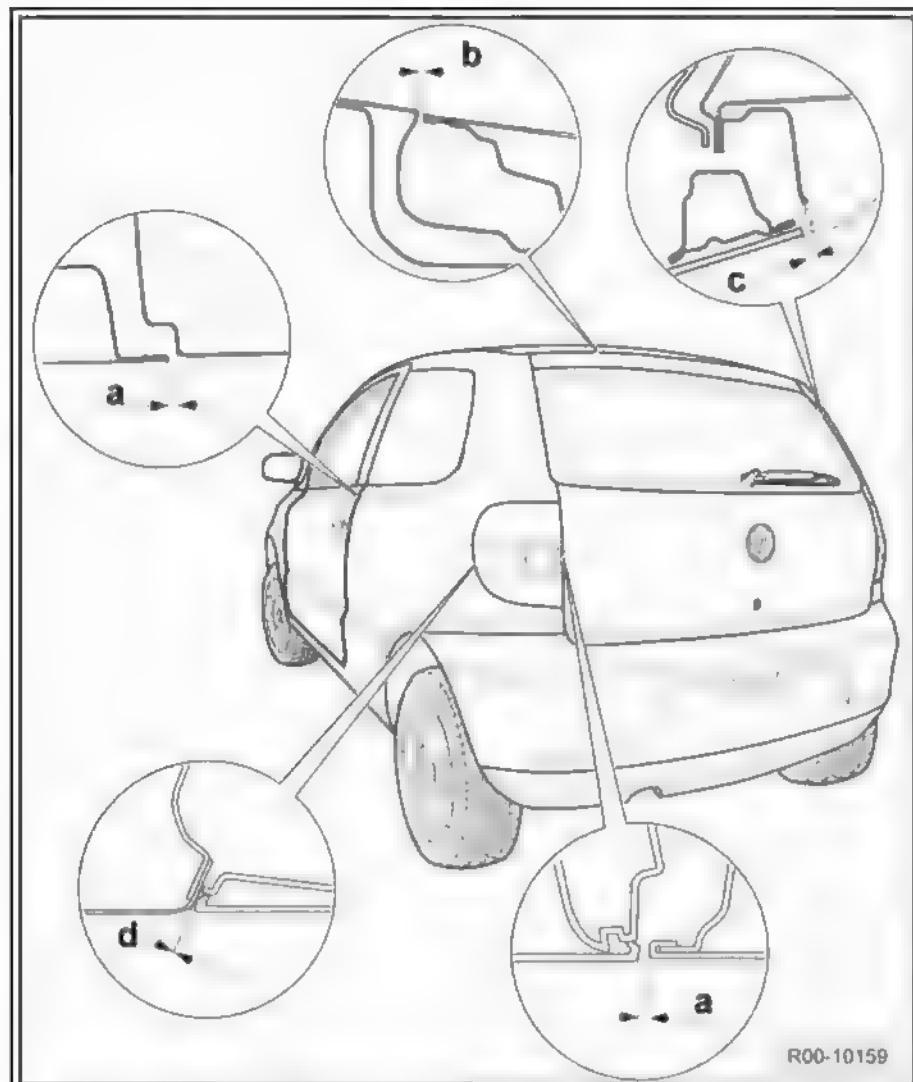
6.2.1 2-door Fox



Note

Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.



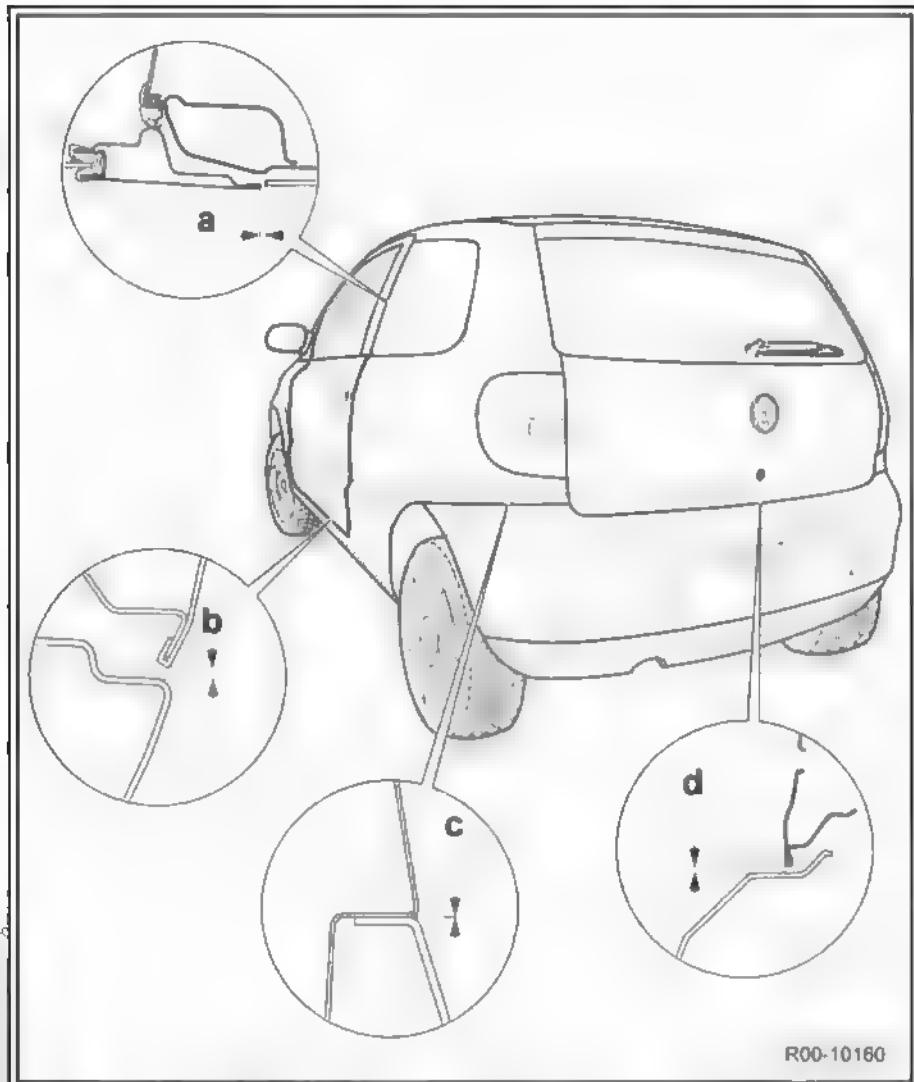


Dimension-a- - $3.5 \text{ mm} \pm 1 \text{ mm}$

Dimension-b - - $4.5 \text{ mm} \pm 1 \text{ mm}$

Dimension -c- - $4.0 \text{ mm} \pm 1 \text{ mm}$

Dimension -d- - $1.0 \text{ mm} \pm 0.25 \text{ mm}$





Dimension-a- - 3.5 mm ± 1 mm - 0.8 mm

Dimension-b - - 4.5 mm ± 1 mm

Dimension -c- - 0 mm + 0.6 - 0.1 mm

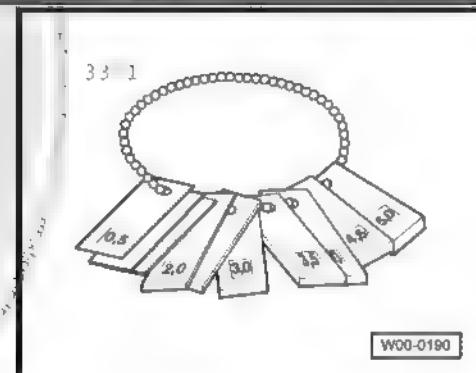
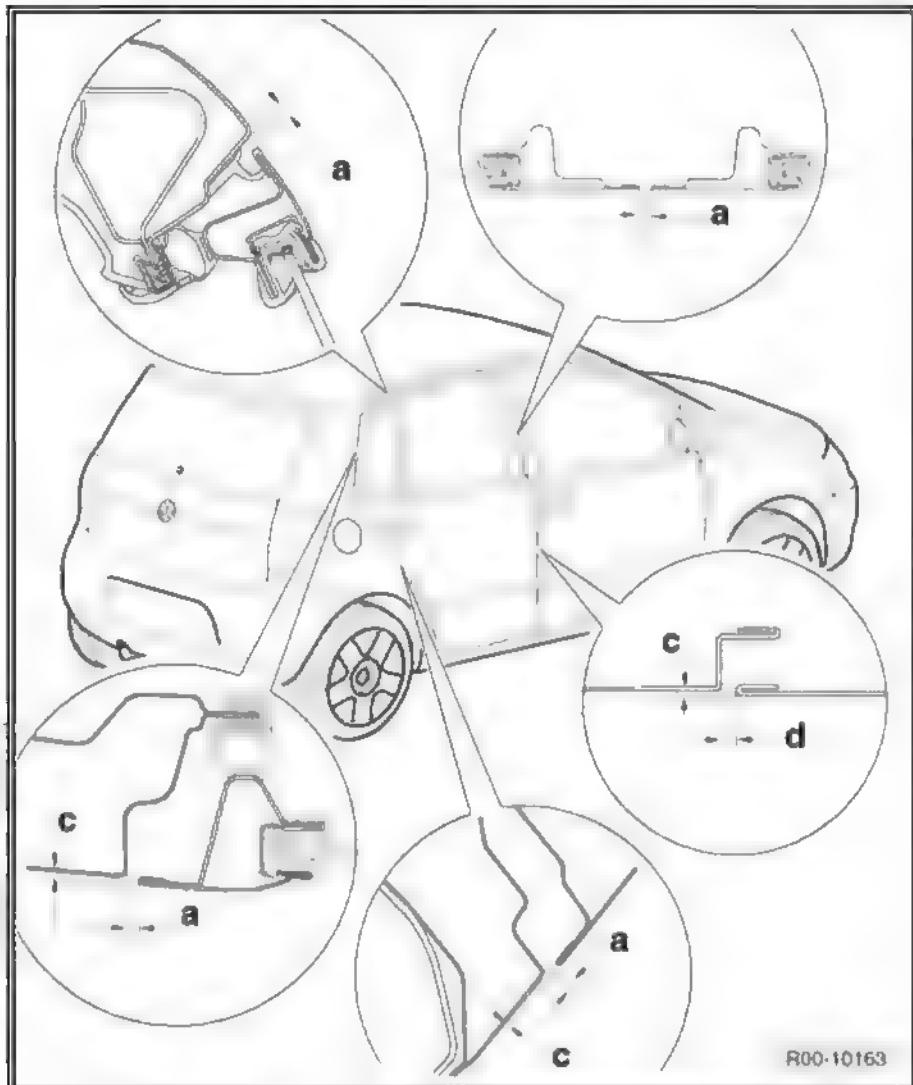
Dimension -d- - 5.5 mm ± 1 mm

6.2.2 4-door Fox



Note

Use the adjustment gauge - 337410 to adjust or control the clearance dimensions

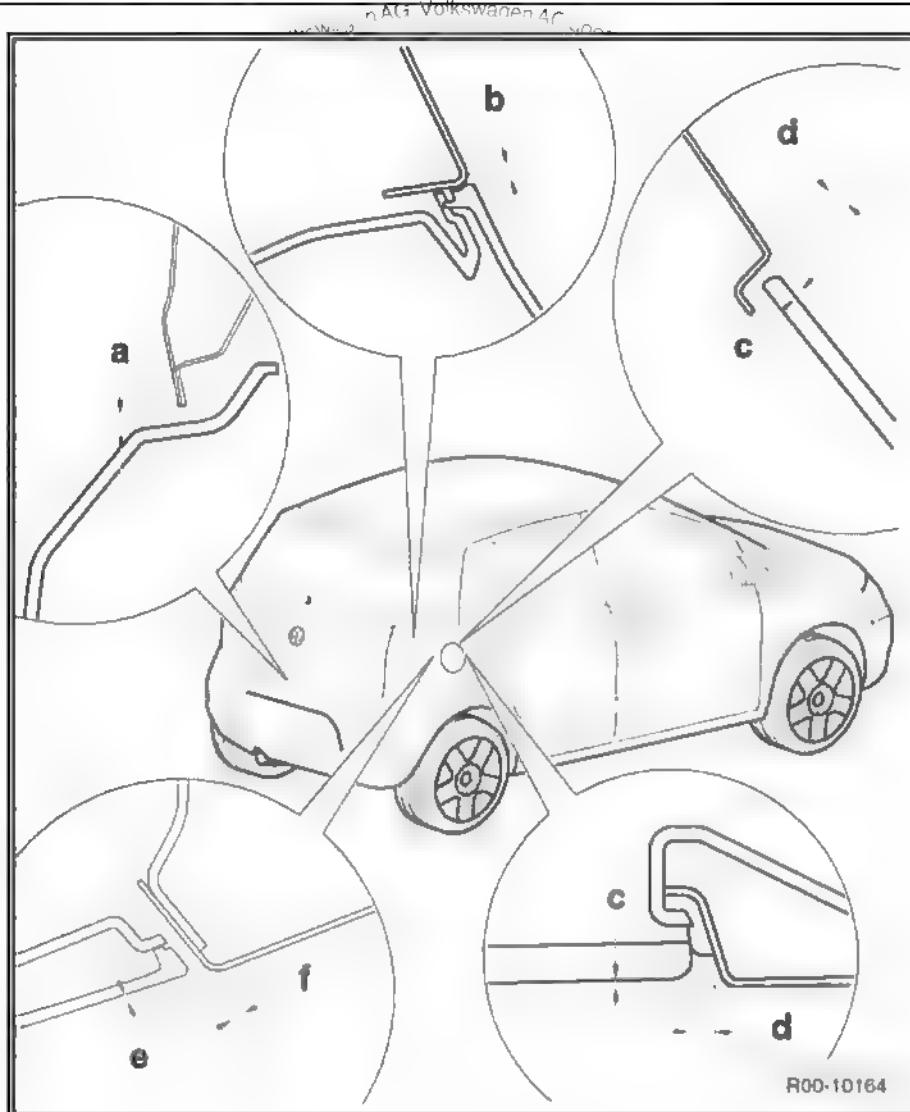


Dimension-a-~~4.5~~ 4.5 mm ± 1 mm

Dimension-b - 1.0 mm \pm 1 mm

Dimension -c- - 3.5 mm \pm 1 mm

Dimension -d- - 4.5 mm \pm 1 mm



Dimension-a- - 5.5 mm \pm 1 mm

Dimension-b - - 1.0 mm + 1 mm

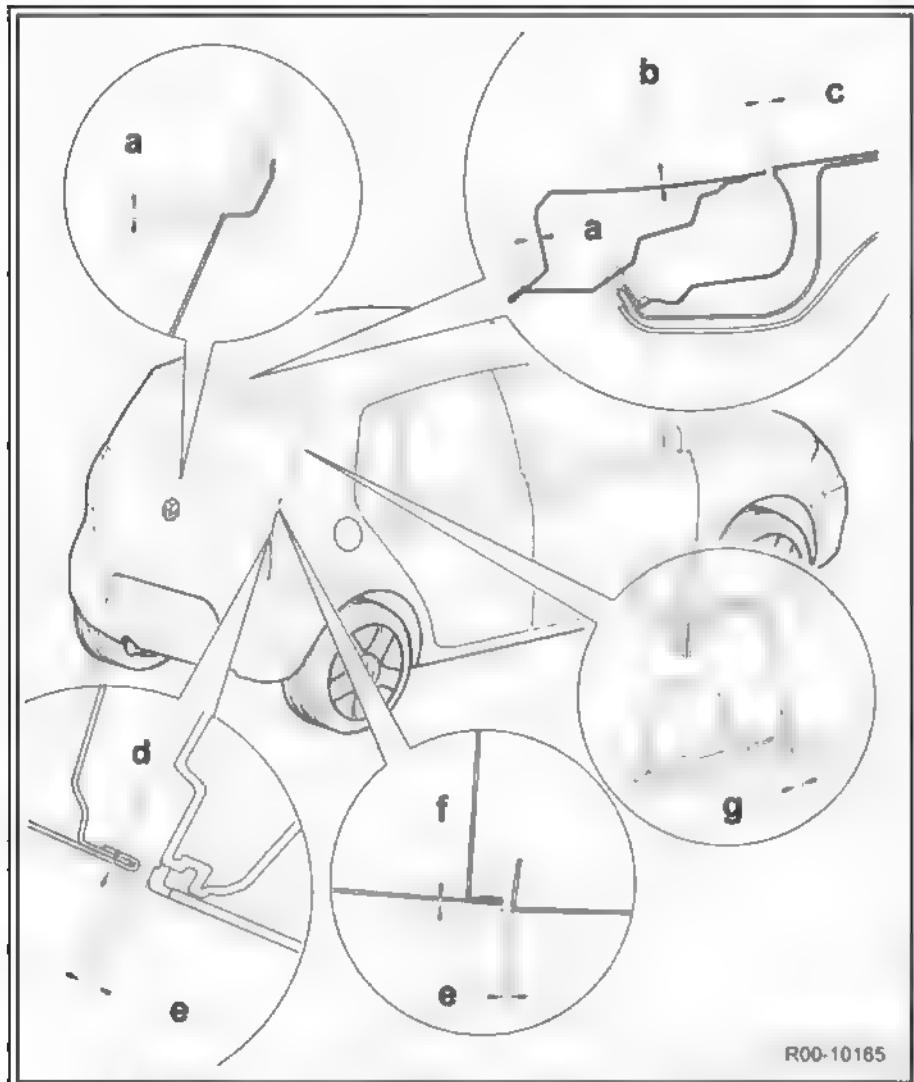
Dimension -c- - 0.95 mm \pm 0.25 mm

Dimension -d- - 2 mm - 0.5 mm

Dimension-e - - 0.6 mm - 0.5 mm

Dimension -f- - 1.0 mm \pm 0.25 mm

Dimension -g- - 2 mm \pm 0.25 mm



Dimension-a - 3 mm \pm 1 mm

Dimension-b - 2.0 mm + 1 mm

Dimension -c- 4.5 mm + 1 mm

Dimension -d- = 1.0 mm + 0.5 mm

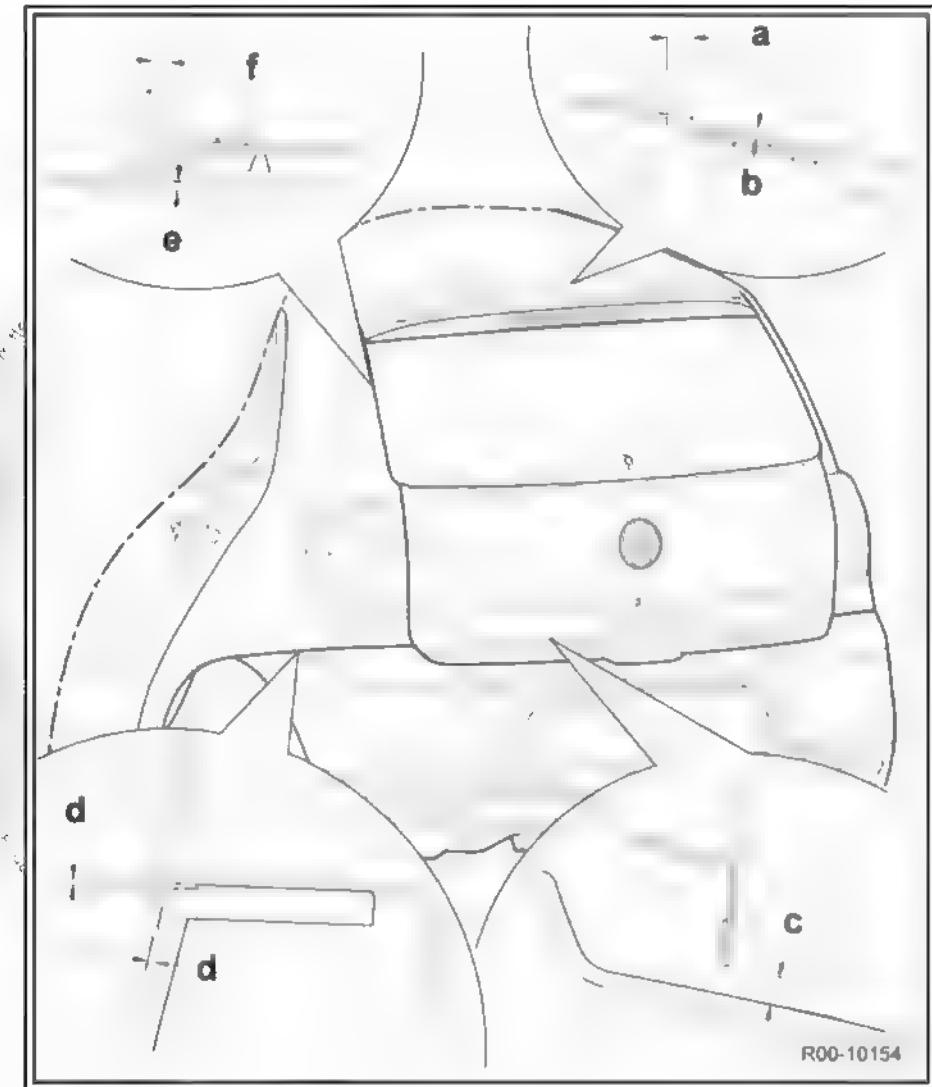
Dimension-e - - 3.5 mm + 1 mm

Dimension -f- - 0.9 mm + .5 mm

Dimension -g- - 4.0 mm \pm 1 mm

6.2.3 New 4-door Eo

6.2.3 New 4-door Fox



Dimension-a- - 4.5 mm \pm 0.5 mm

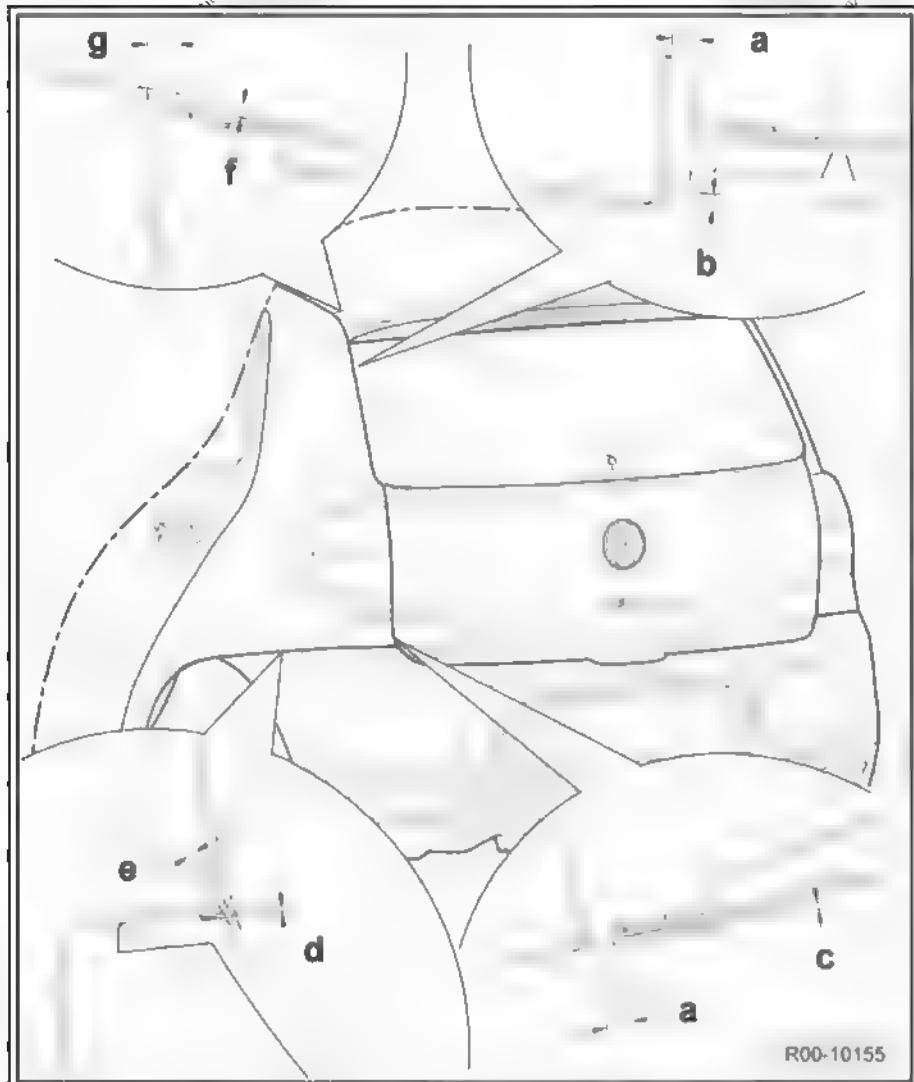
Dimension-b - - 2.0 mm - 1 mm

Dimension -c- = 5.0 mm \pm 0.5 mm

Dimension -d- = 5.0 mm \pm 0.5 mm

Dimension = 0.5 mm \pm 0.5 mm

Dimension -f- : 2.0 mm \pm 0.5 mm



Dimension-a - $3.5 \text{ mm} \pm 0.5 \text{ mm}$

Dimension-b - $2.0 \text{ mm} \pm 0.5 \text{ mm}$

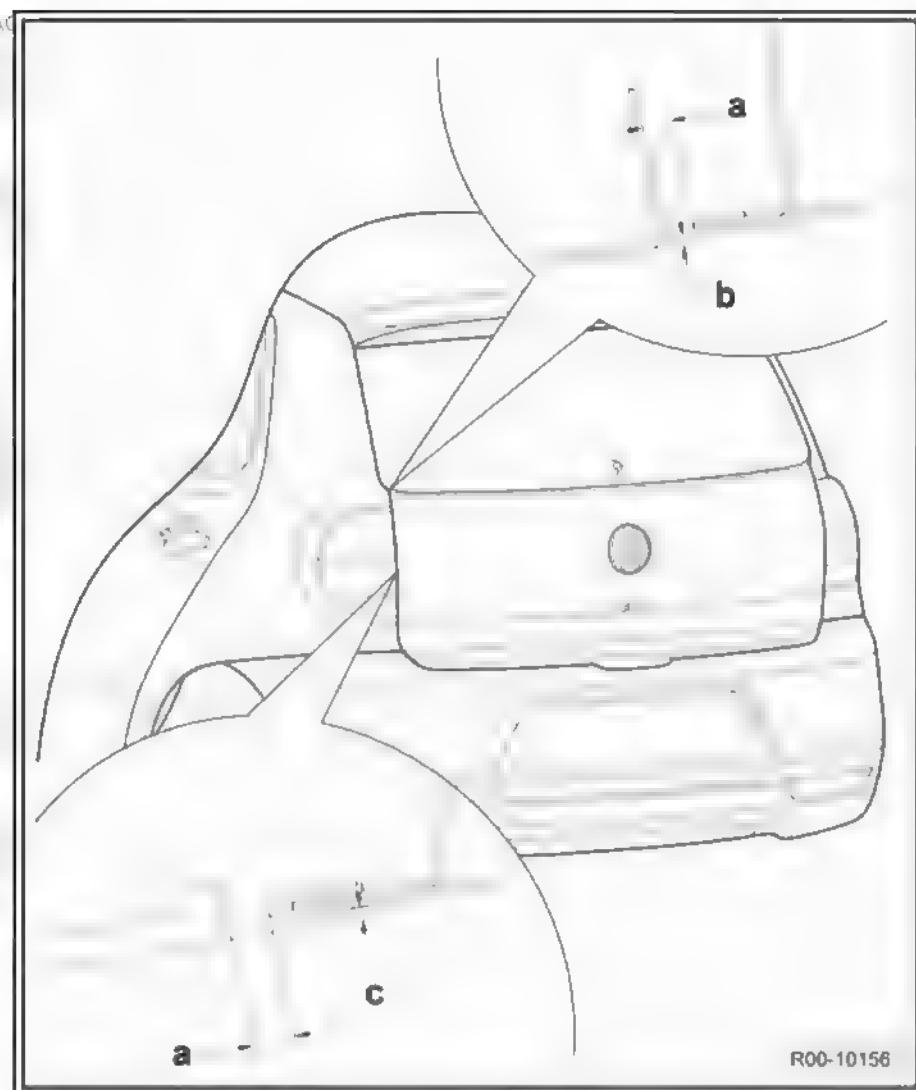
Dimension -c- - $0.8 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -d- - $0.5 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -e- - $1.0 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -f- - $2.0 \text{ mm} - 1 \text{ mm}$

Dimension -g- - $4.5 \text{ mm} \pm 0.5 \text{ mm}$



Dimension-a - $3.5 \text{ mm} \pm 0.5 \text{ mm}$

Dimension-b - $0.8 \text{ mm} \pm 0.5 \text{ mm}$

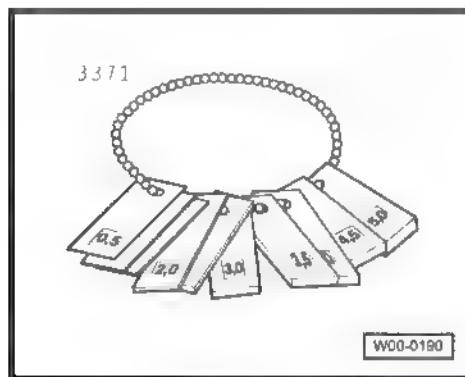
Dimension -c- - $1.0 \text{ mm} \pm 0.5 \text{ mm}$

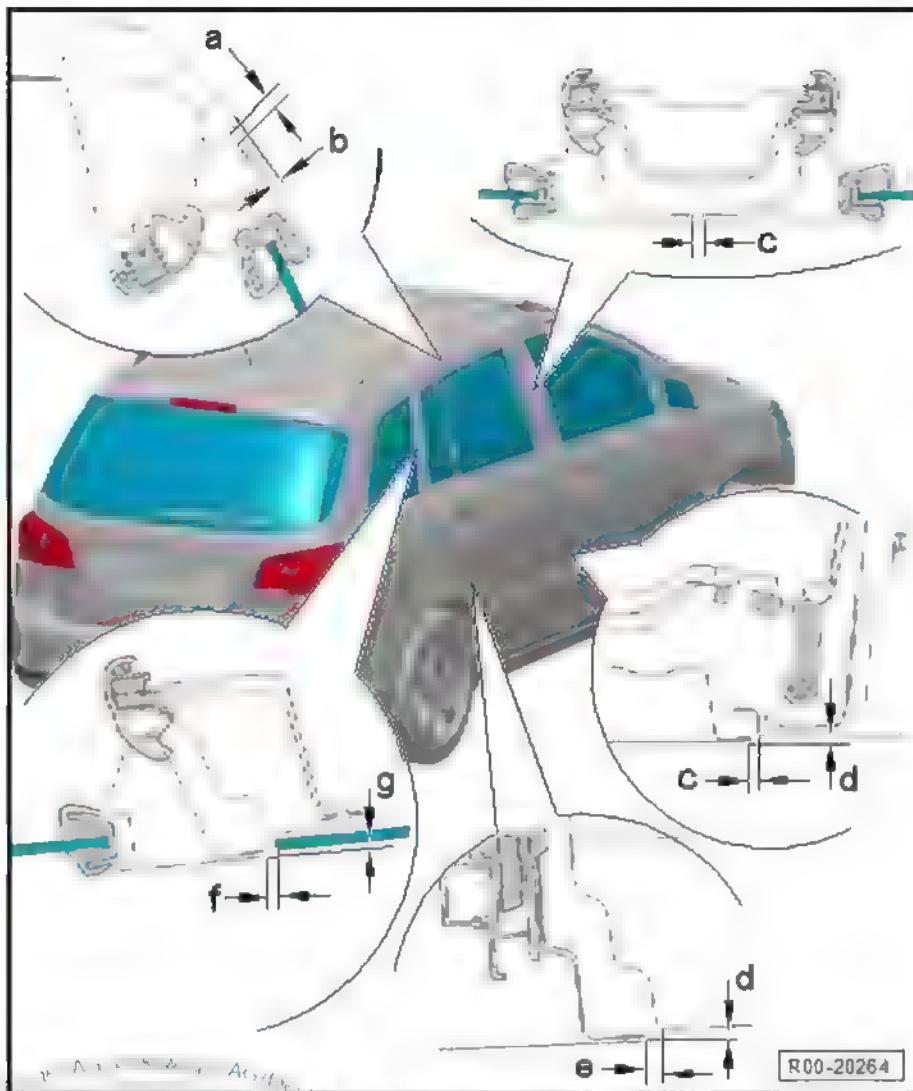
6.2.4 Spacefox



Note

Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.





Dimension -a- - 4,5 mm

Dimension -b- - 2,8 mm

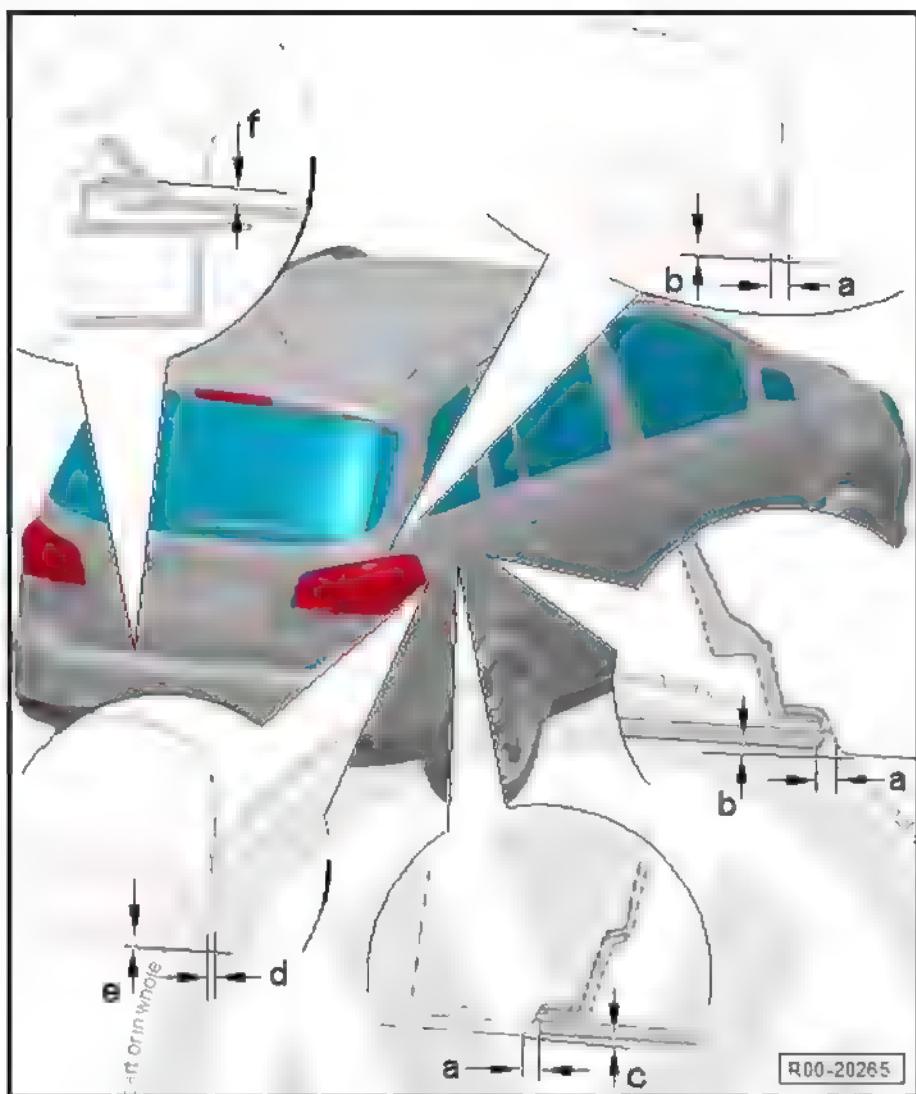
Dimension -c- - 4,2 mm + 1 mm

Dimension -d- - 1 mm - 1 mm

Dimension -e- - 3,5 mm + 1 mm

Dimension -f- - 4,0 mm

Dimension -g- - 2,0 mm



Dimension-a - $2.0 \text{ mm} \pm 0.5 \text{ mm}$

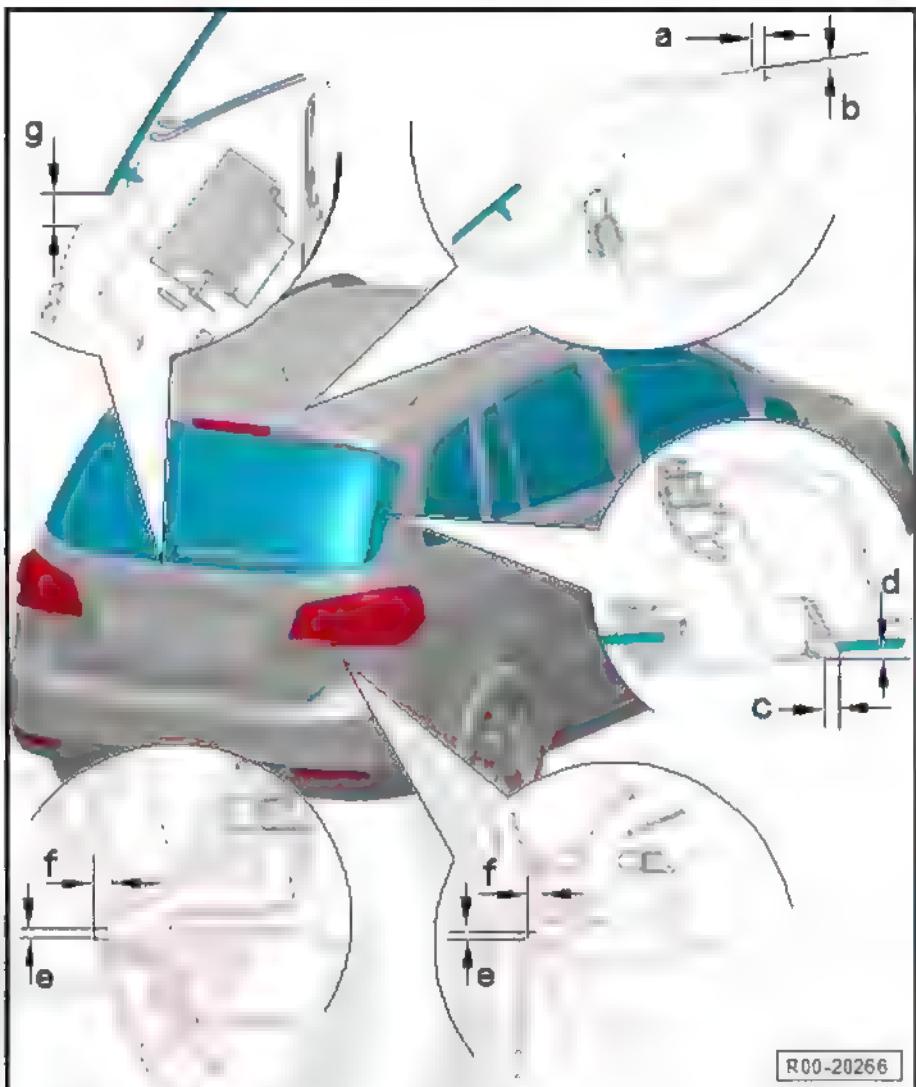
Dimension -b- - 0.8 mm

Dimension -c- - $0.8 \pm 0.25 \text{ mm}$

Dimension -d- - $1 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -e- - $0.8 \text{ mm} \pm 0.5 \text{ mm}$

Dimension -f- - $5.5 + 1 \text{ mm}$



R00-20266



Dimension -a- - 4.7 mm

Dimension -b- - 2.0 mm

Dimension -c- - 4,0 mm

Dimension -d- - 2,3 mm

Dimension -e- - 3.5 mm + 1 mm

Dimension -f- - 0.8 mm ± 0.5 mm

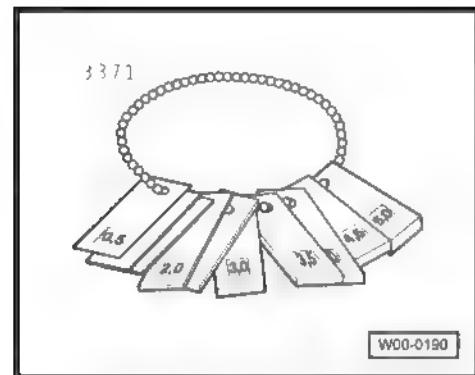
Dimension -g- - 3.0 mm ± 1 mm

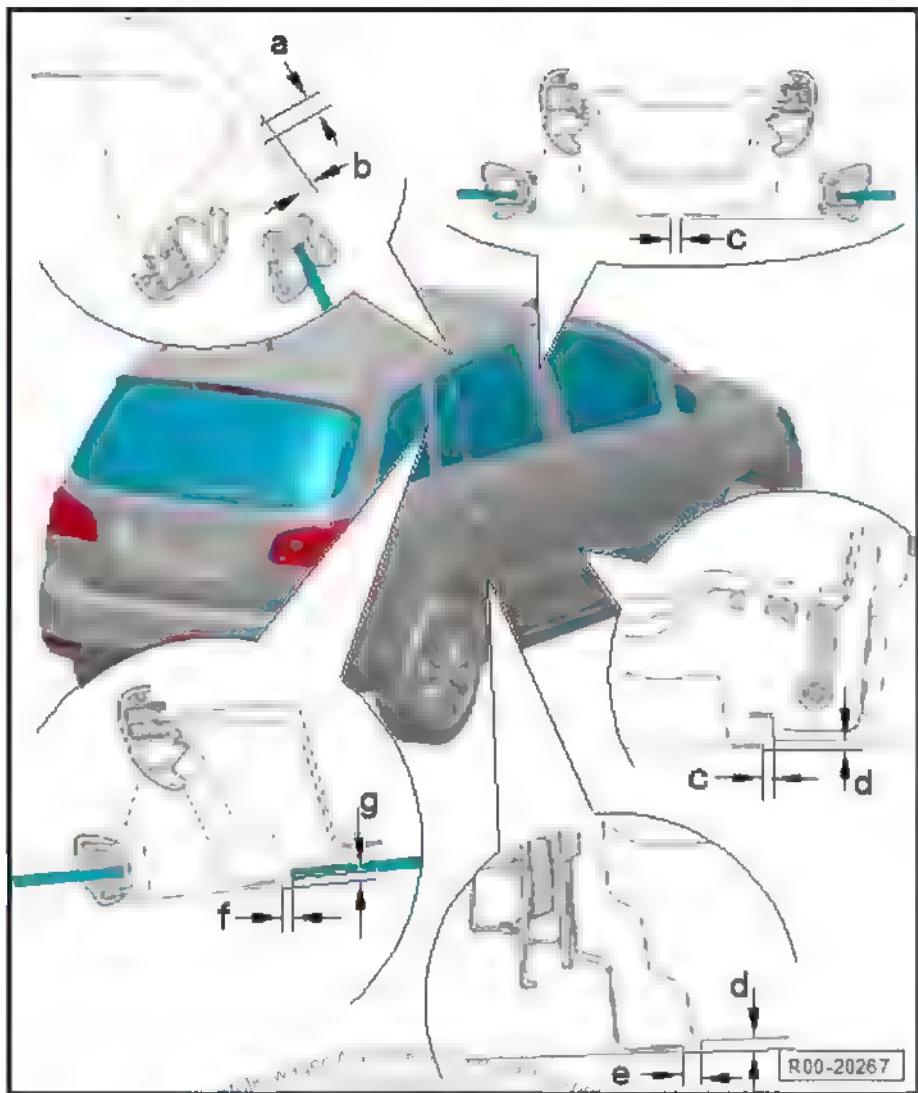
6.2.5 New Spacefox



Note

Use the adjustment gauge - 3371- to adjust or control the clearance dimensions.





Dimension -a- - 4,5 mm

Dimension -b- - 2,8 mm

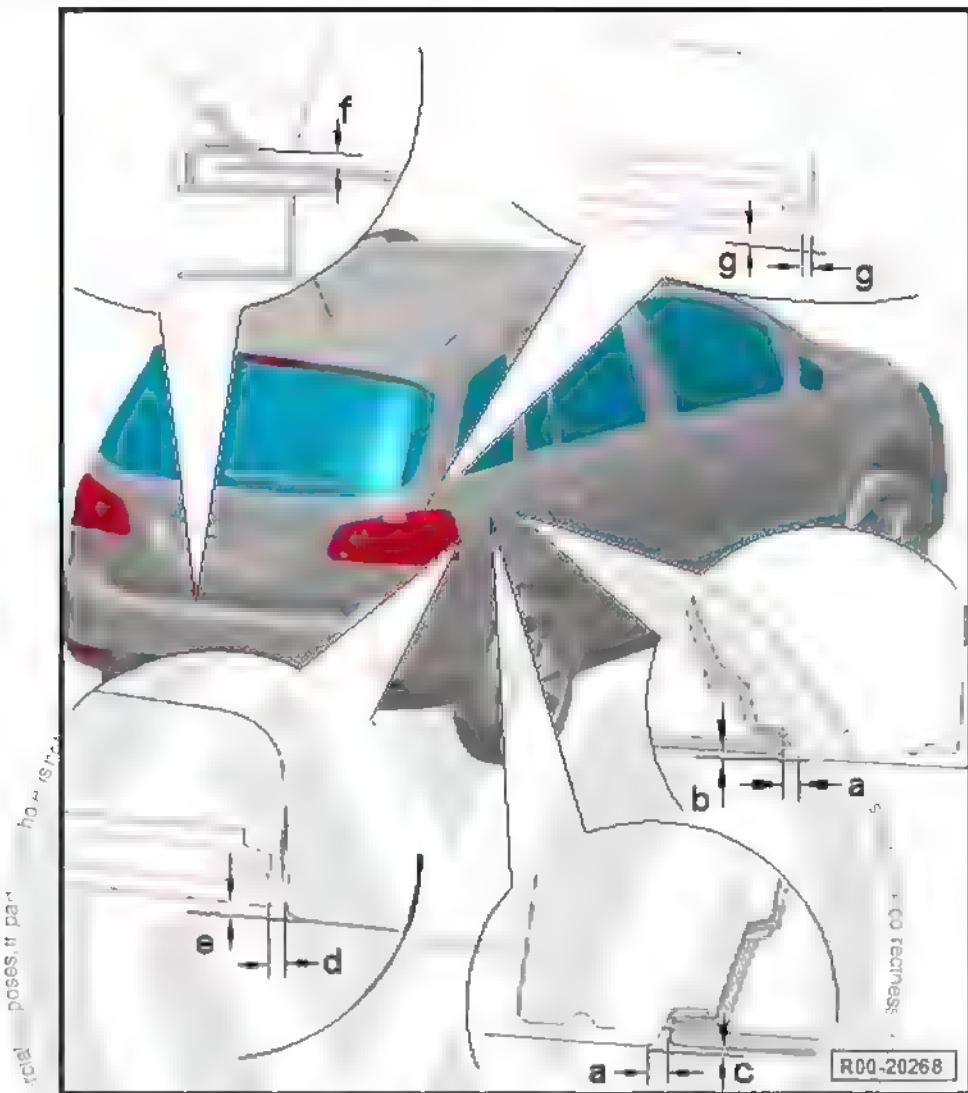
Dimension -c- - 4,2 mm + 1 mm

Dimension -d- - 1,0 mm - 1 mm

Dimension -e- - 3,5 mm + 1 mm

Dimension -f- - 4,0 mm

Dimension -g- - 2,0 mm



Dimension-a- - 2.0 mm \pm 0.5 mm

Dimension -b- = 0.8 mm

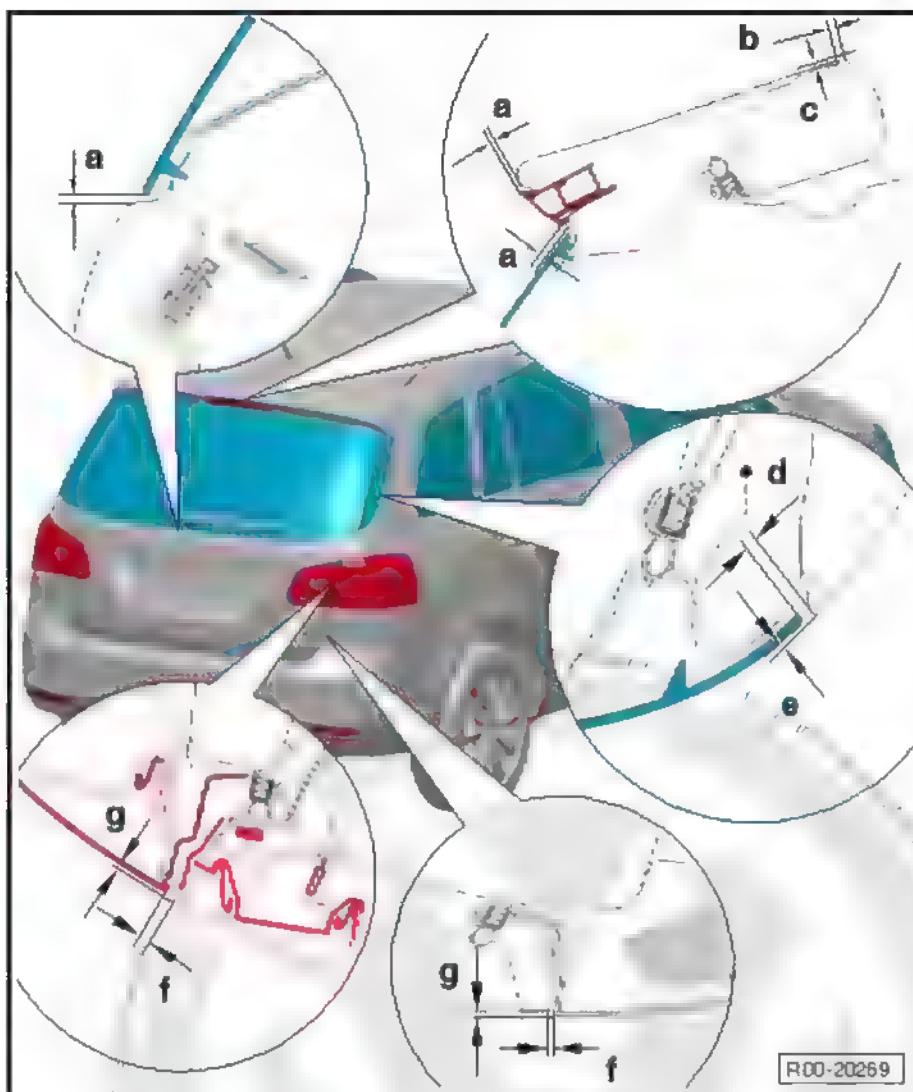
Dimension -c- 0.8 mm \pm 0.25 mm

Dimension -d- = 1.0 mm \pm 0.5 mm

Dimension -e- 0.8 mm \pm 0.5 mm

Dimension -f- - 5.5 mm + 1 mm

Dimension -g- - 1.0 mm



Dimension -a- - 1.0 mm

Dimension -b- - 4.7 mm

Dimension -c- - 2.0 mm

Dimension -d- - 4.0 mm

Dimension -e- - 2.3 mm

Dimension -f- - 0.8 mm ± 0.5 mm

Dimension -g- - 3.5 mm + 1 mm

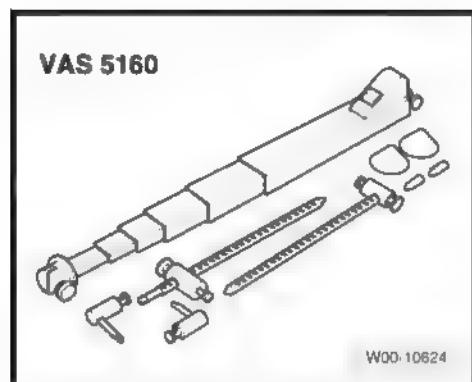


7 Body dimensions

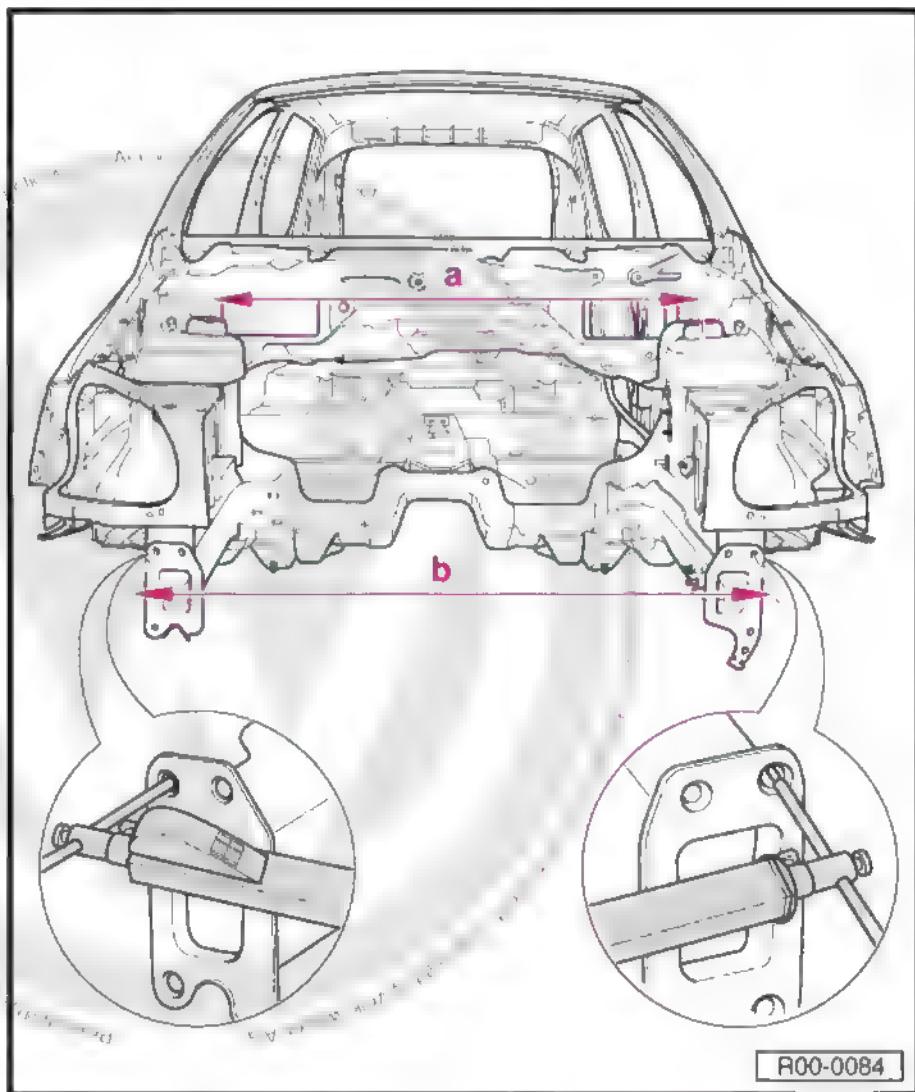


Note

- ◆ Body dimensions can be used for control purposes. The decisive factor is the alignment platform. Screws, plugs, linings and complementary parts, shall already be removed before the measuring process
- ◆ Use the Telescopic gauge - 41.5 to 92.5 cm - VAS 5159- to determine the body dimensions or the Telescopic gauge - 92 to 260 cm - VAS 5160- .



7.1 Body - front section



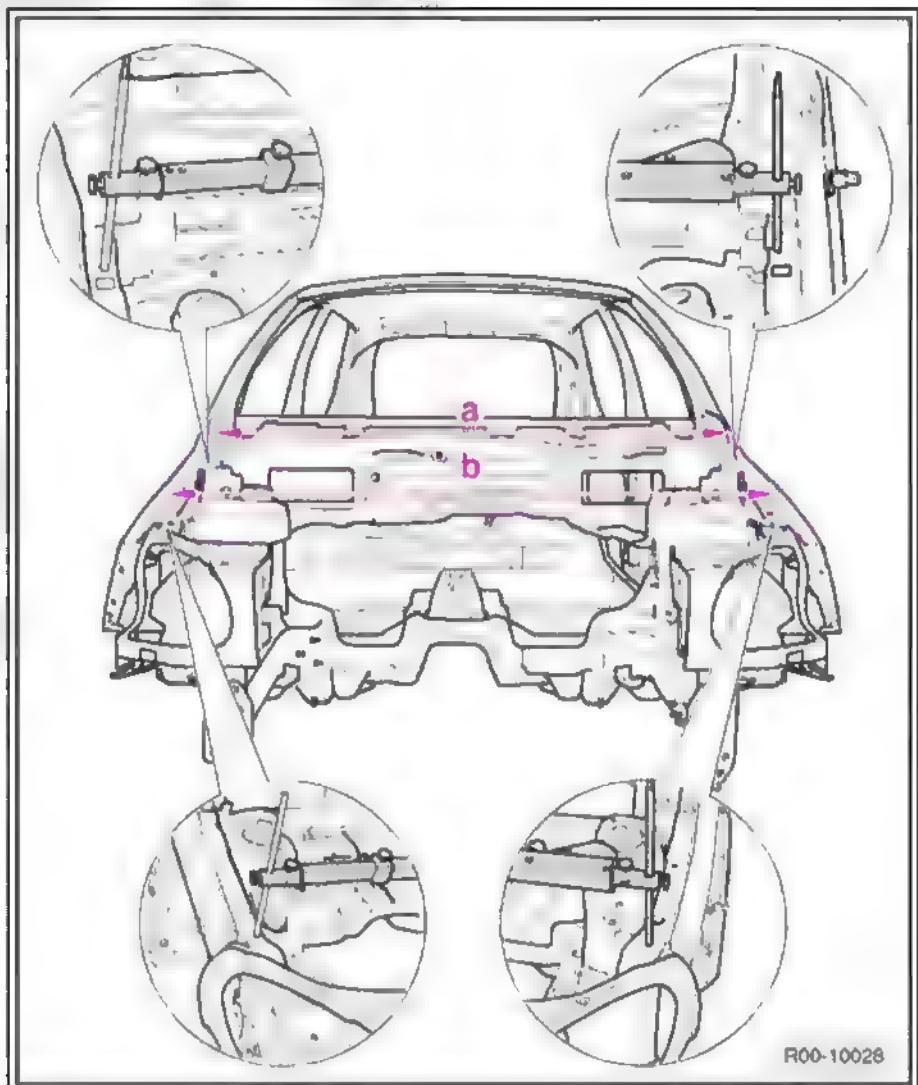
Distance between the suspension strut tower holes

$a = 1041 \pm 1\text{mm}$



Distance between the front bumper fastening support holes

$$b = 947 \pm 1\text{mm}$$

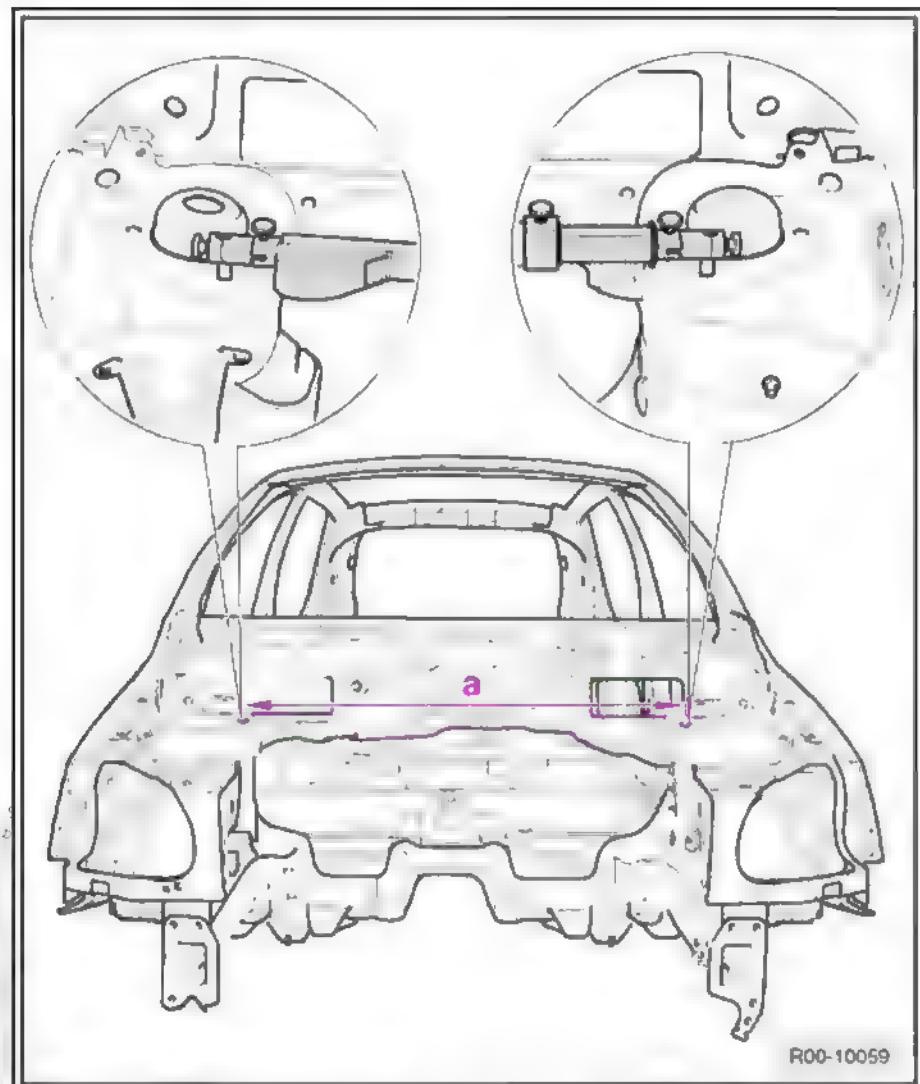


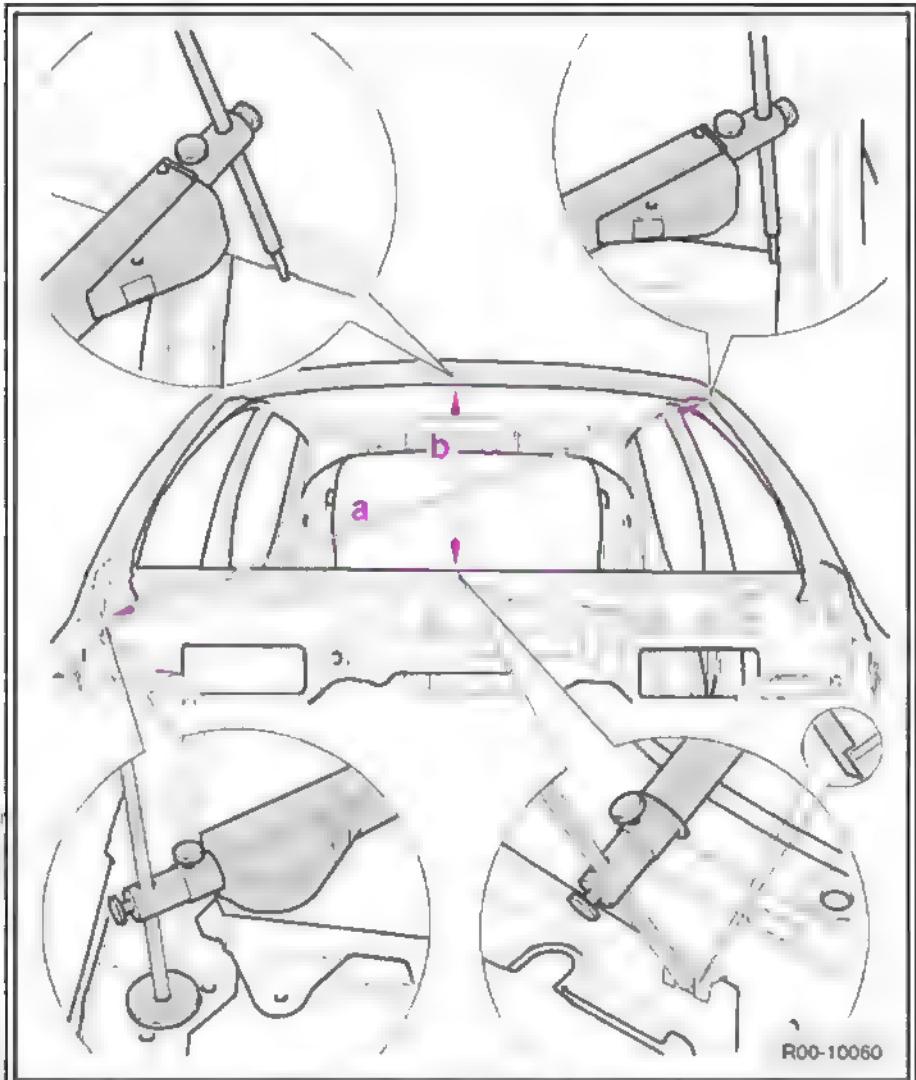
Distance between the holes in the upper wheel arch section (front bonnet hinge fastening)

$$a = 1302 \pm 1\text{mm}$$

Distance between the front wheel arch fastening holes

$$b = 1266 \pm 1\text{mm}$$





Diagonal distance of the windscreen gap

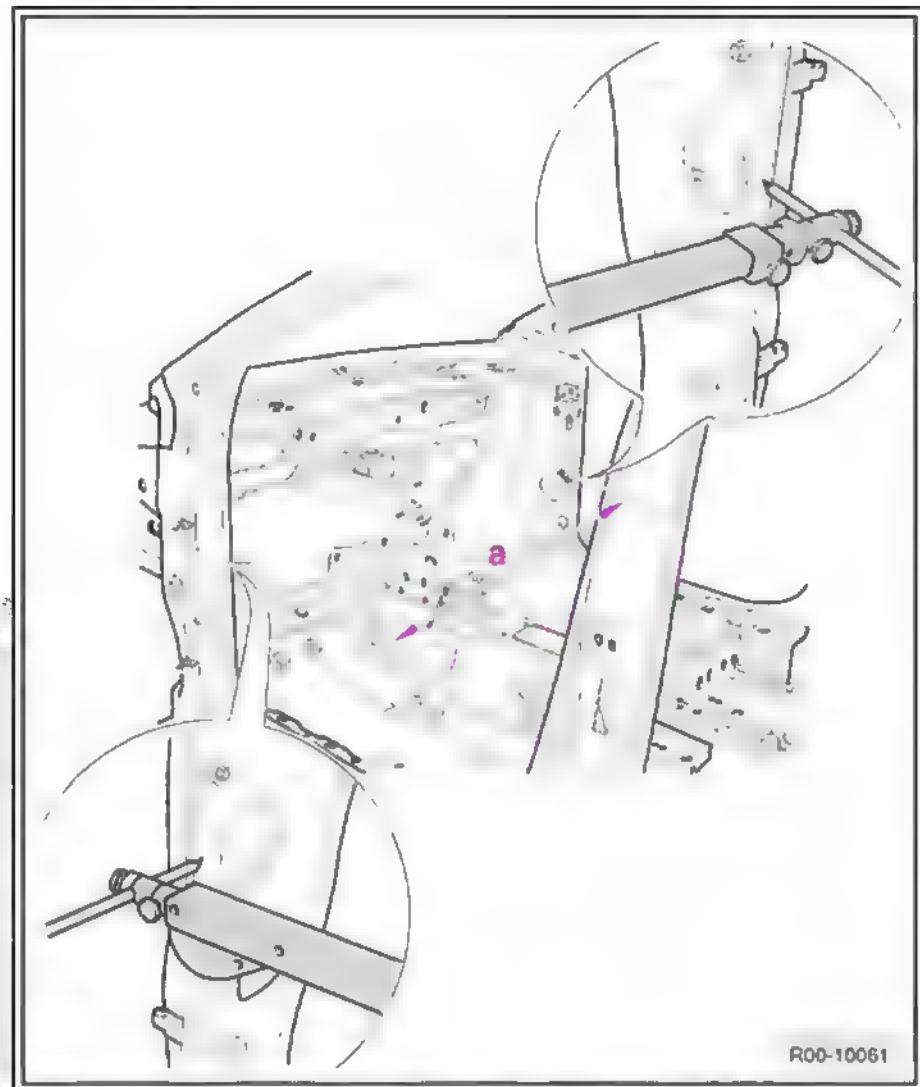
$a = 1435 \pm 1\text{mm}$

Distance between the water deflector panel flange and the roof flange (centre)

$b = 910 \pm 1\text{mm}$

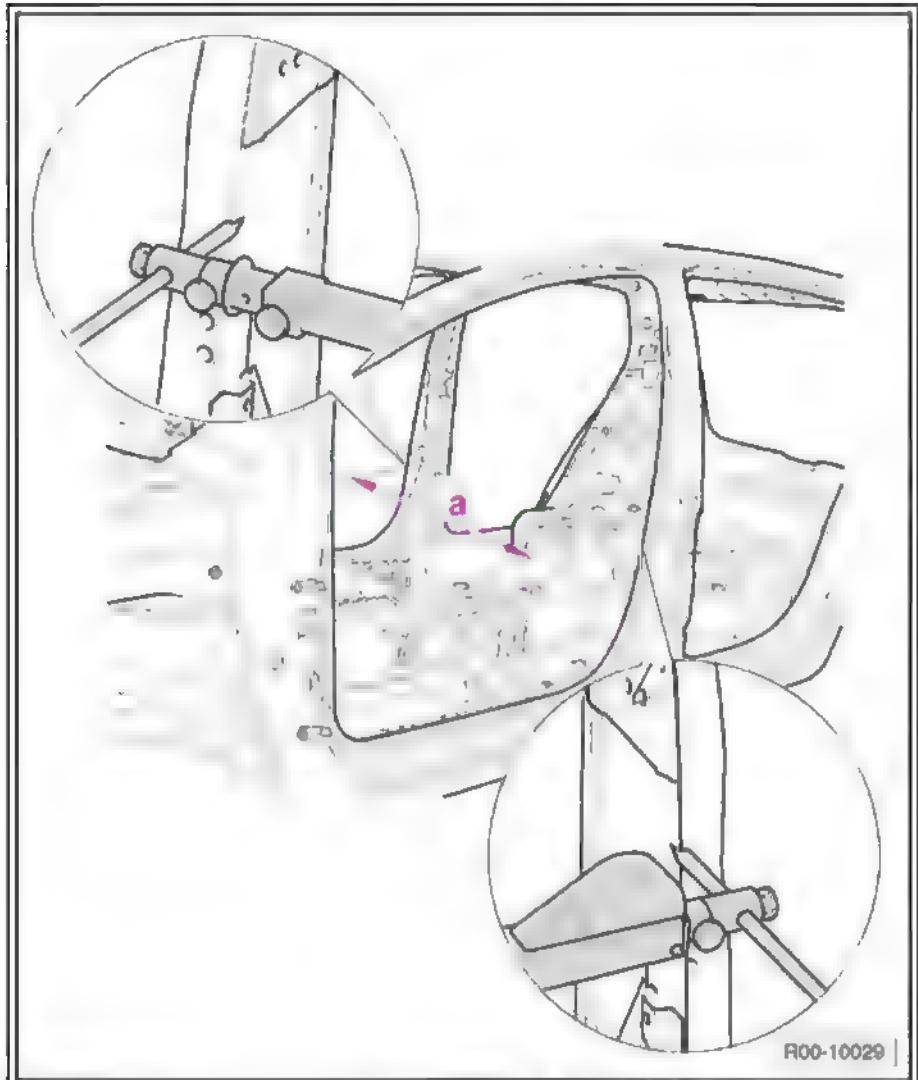


7.2 Body - central section



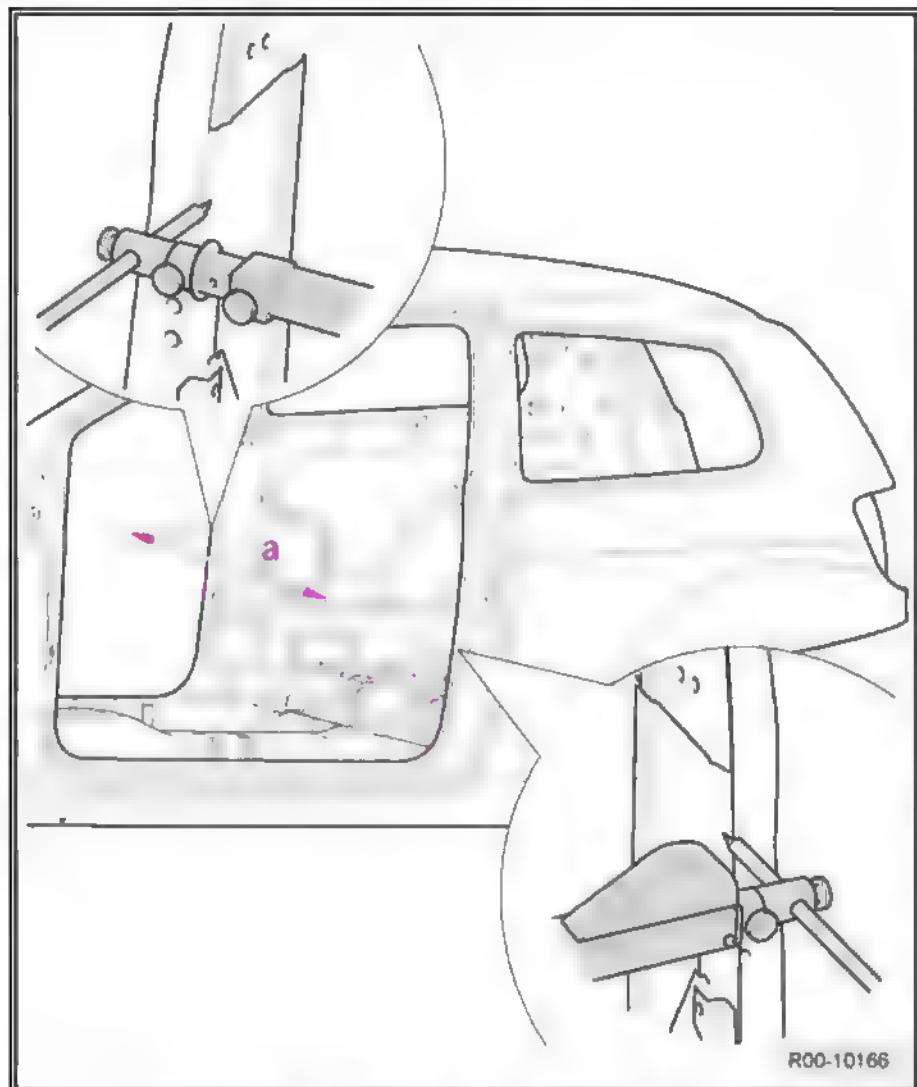
Distance between the A-pillars

$a = 1353 \pm 2\text{mm}$



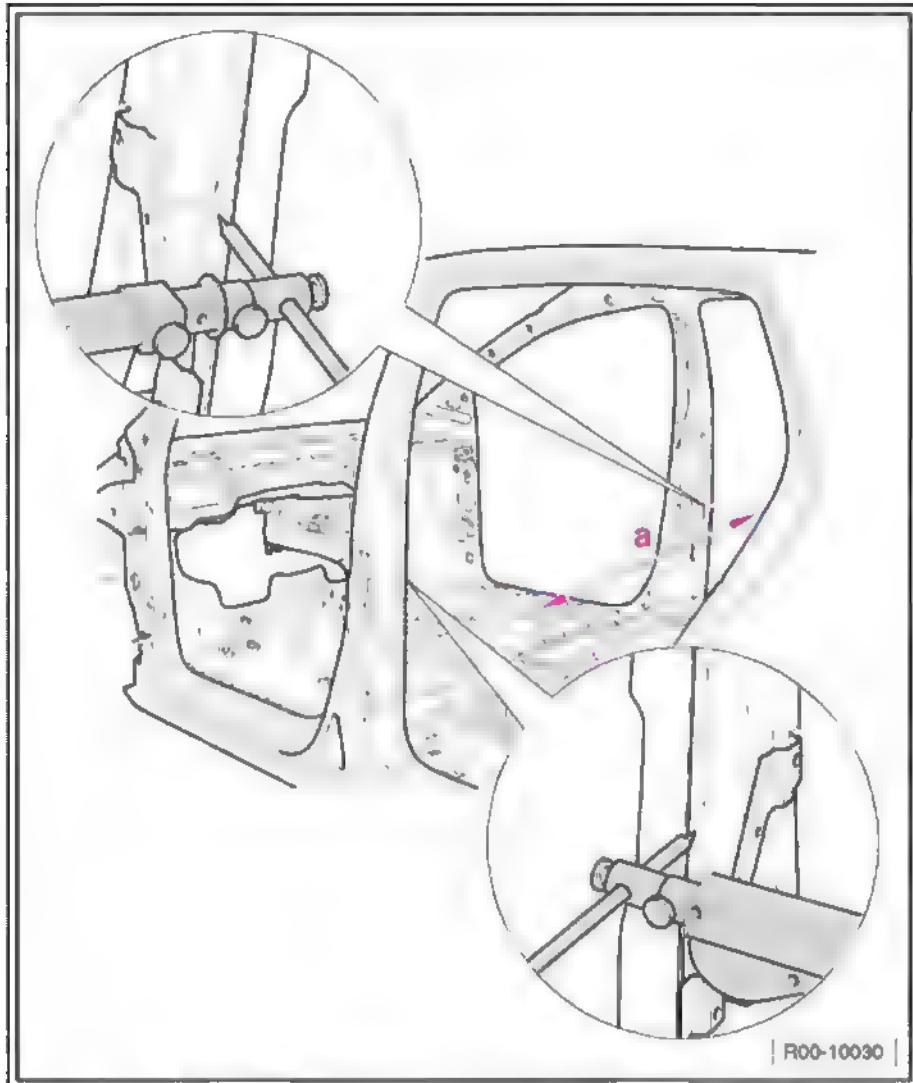
Distance between the B-pillars (front section - 4-door and Space-
fox)

$a = 1351 \pm 2\text{mm}$



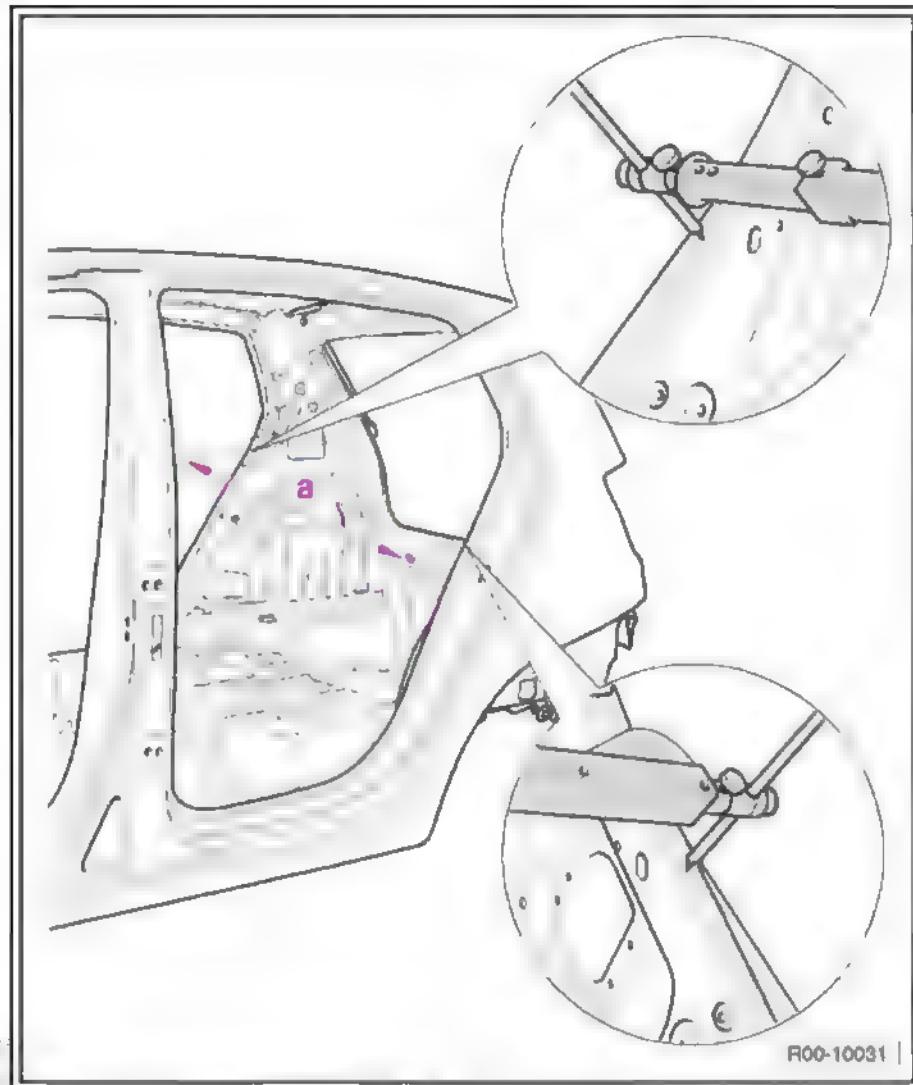
Distance between the B-pillars (front section - 2 doors)

$$a = 1350 \pm 2\text{mm}$$



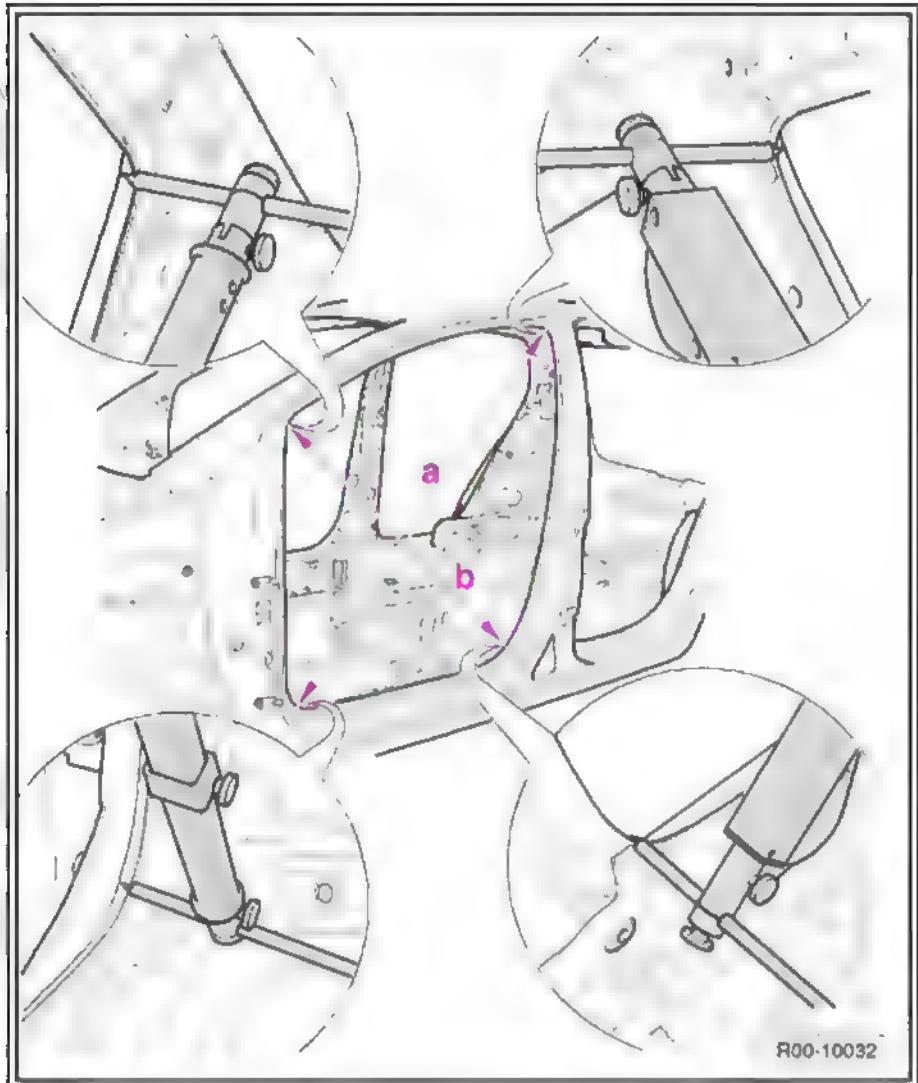
Distance between the B-pillars (front section - 4-door and Space-
fox)

$a = 1355 \pm 2\text{mm}$



Distance between the C-pillars (4-door and Spacefox)

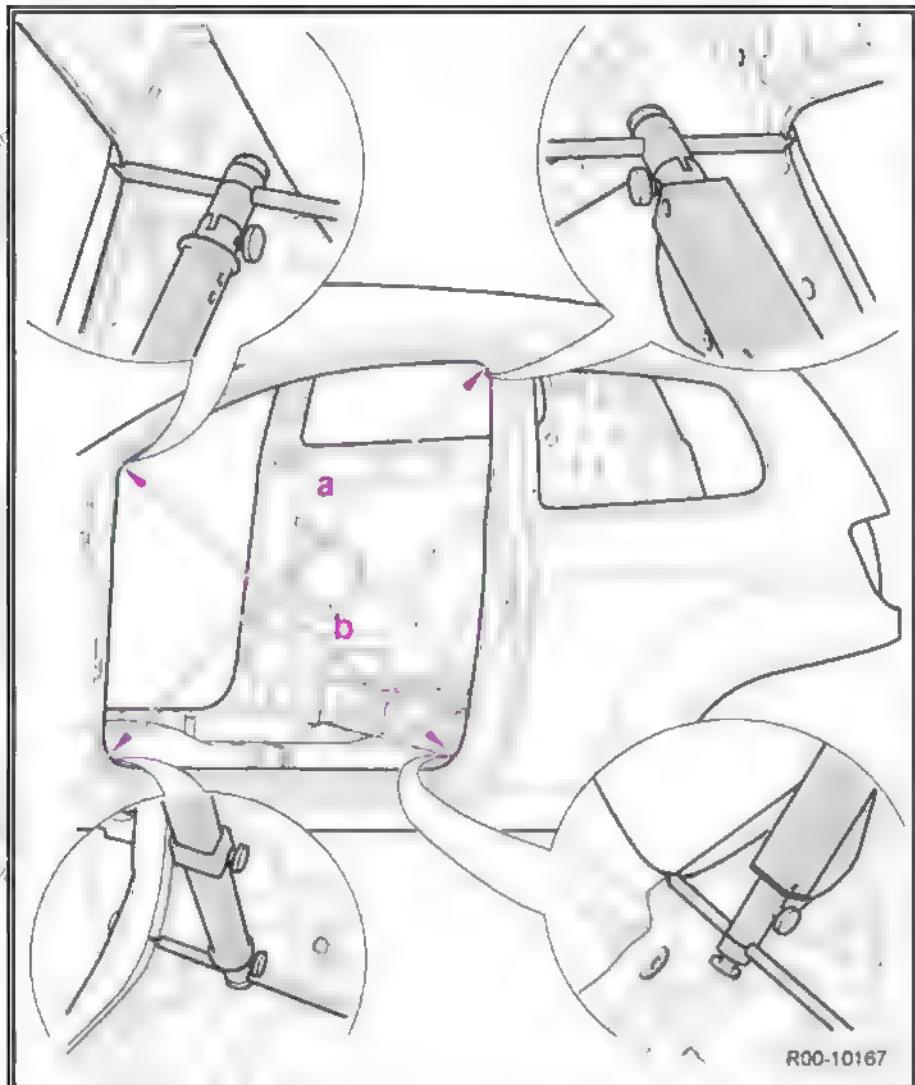
$a = 1295 \pm 2\text{mm}$



Gap to front door (4-door and Spacefox)

a = $1350 \pm 2\text{mm}$

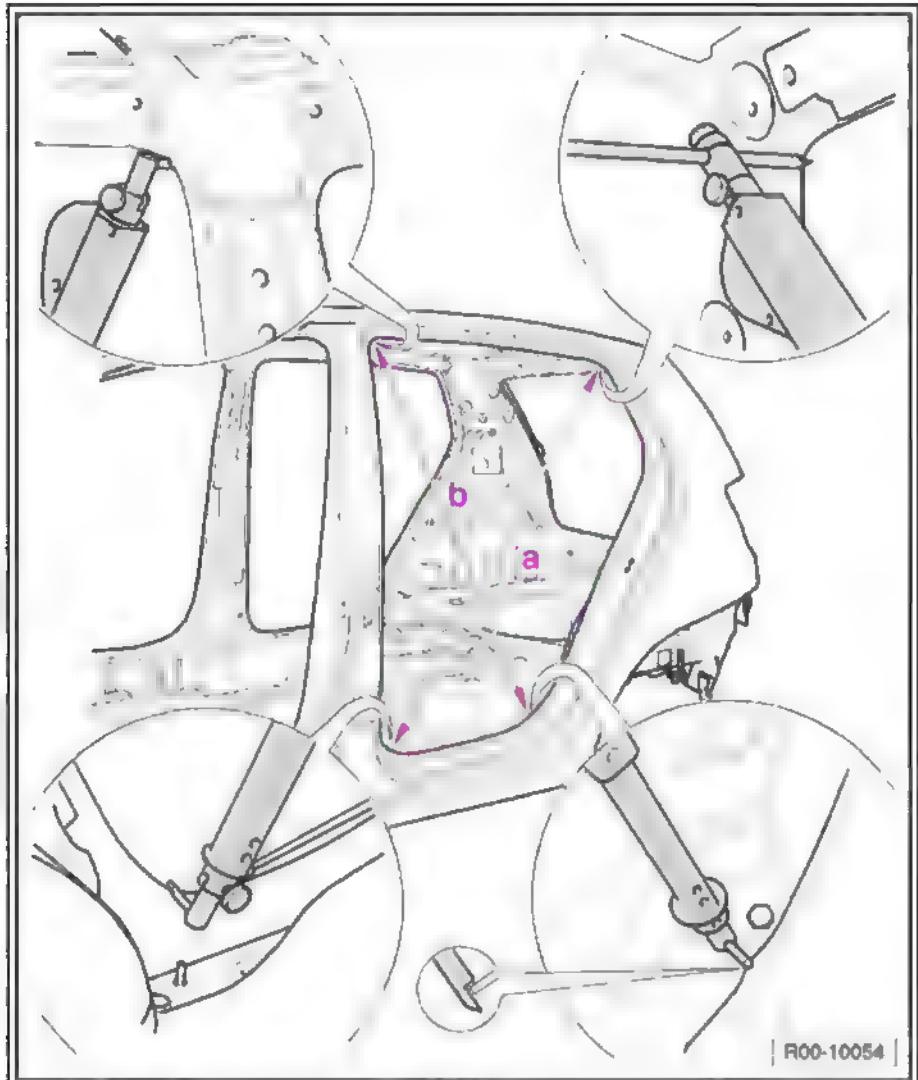
b = $1010 \pm 2\text{mm}$



Gap to front door (2 doors)

a = $1506 \pm 2\text{mm}$

b = $1249 \pm 2\text{mm}$



Gap to front door (4-door and Spacefox)

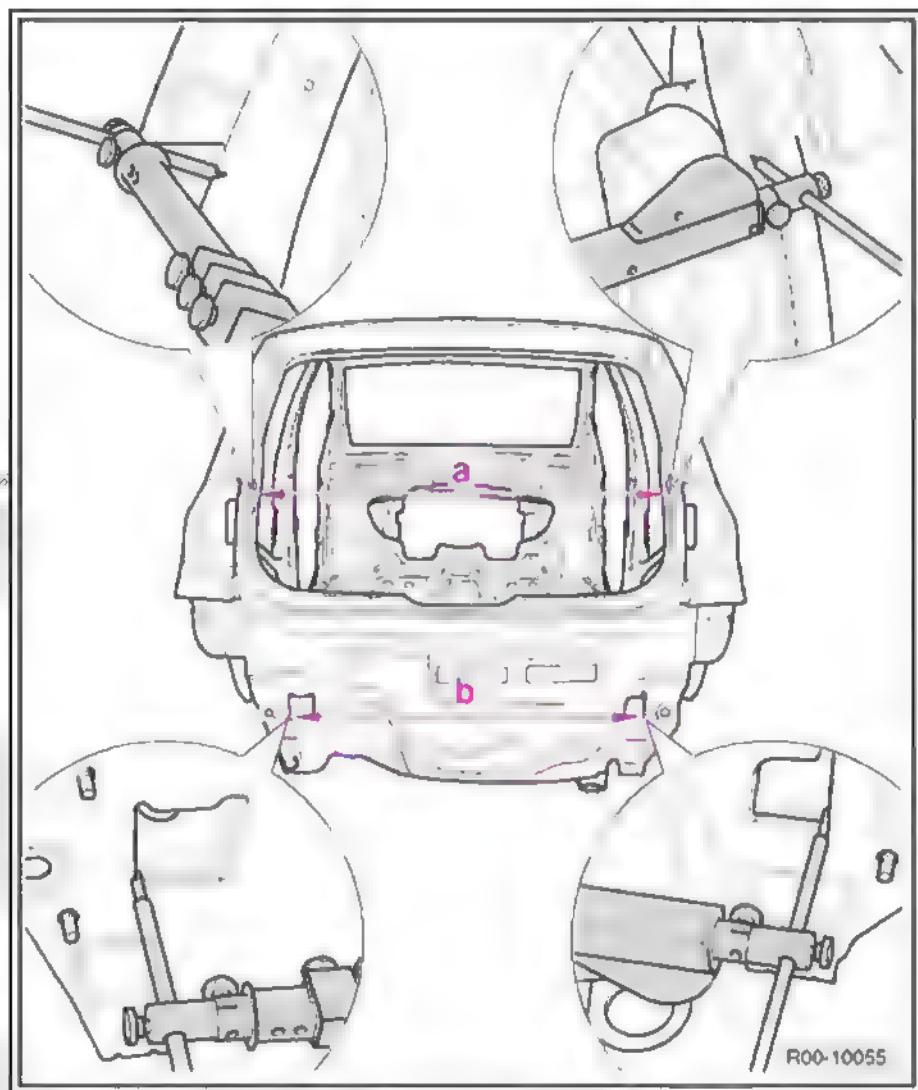
a = $1228 \pm 2\text{mm}$

b = $1070 \pm 2\text{mm}$



7.3 Body - rear section

7.3.1 Fox

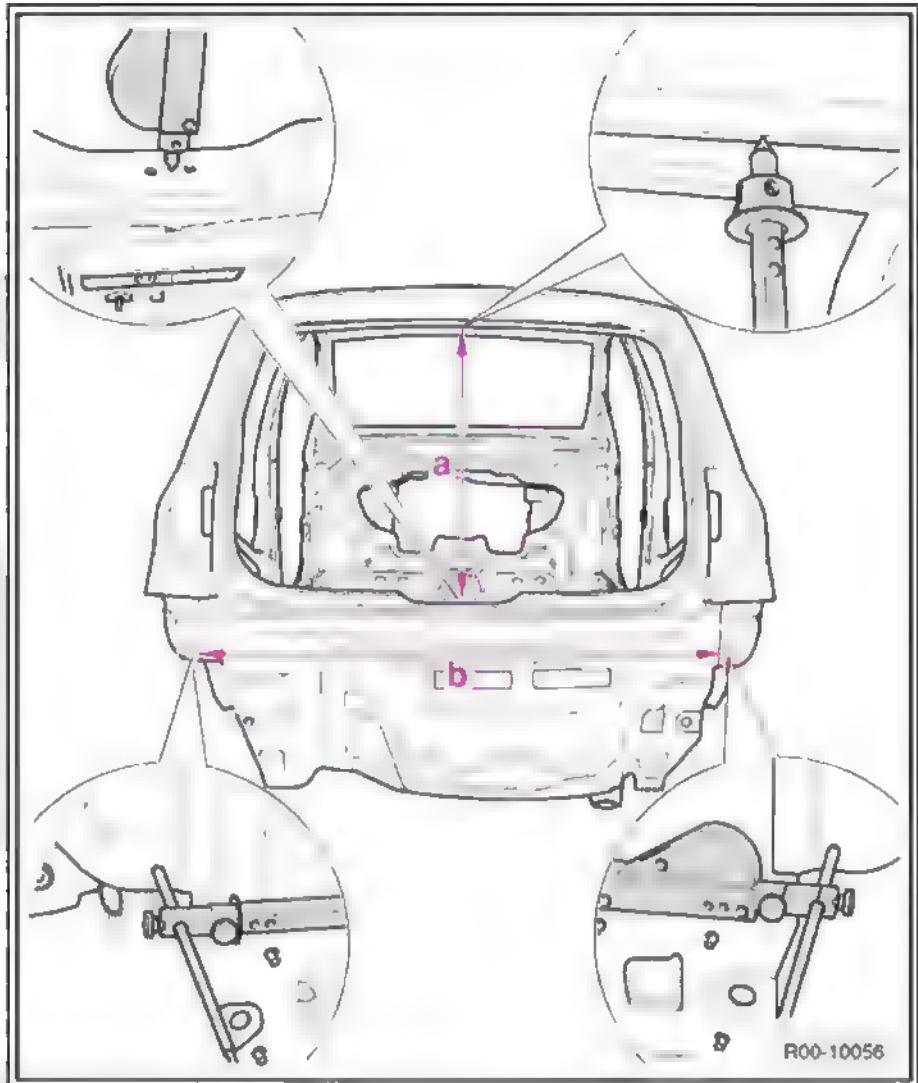


Gap width for boot

$a = 1053 \pm 2\text{mm}$

Distance between the rear cross members

$b = 952 \pm 2\text{mm}$



Distance between the closing plate edges and the roof edge (in the vehicle centre)

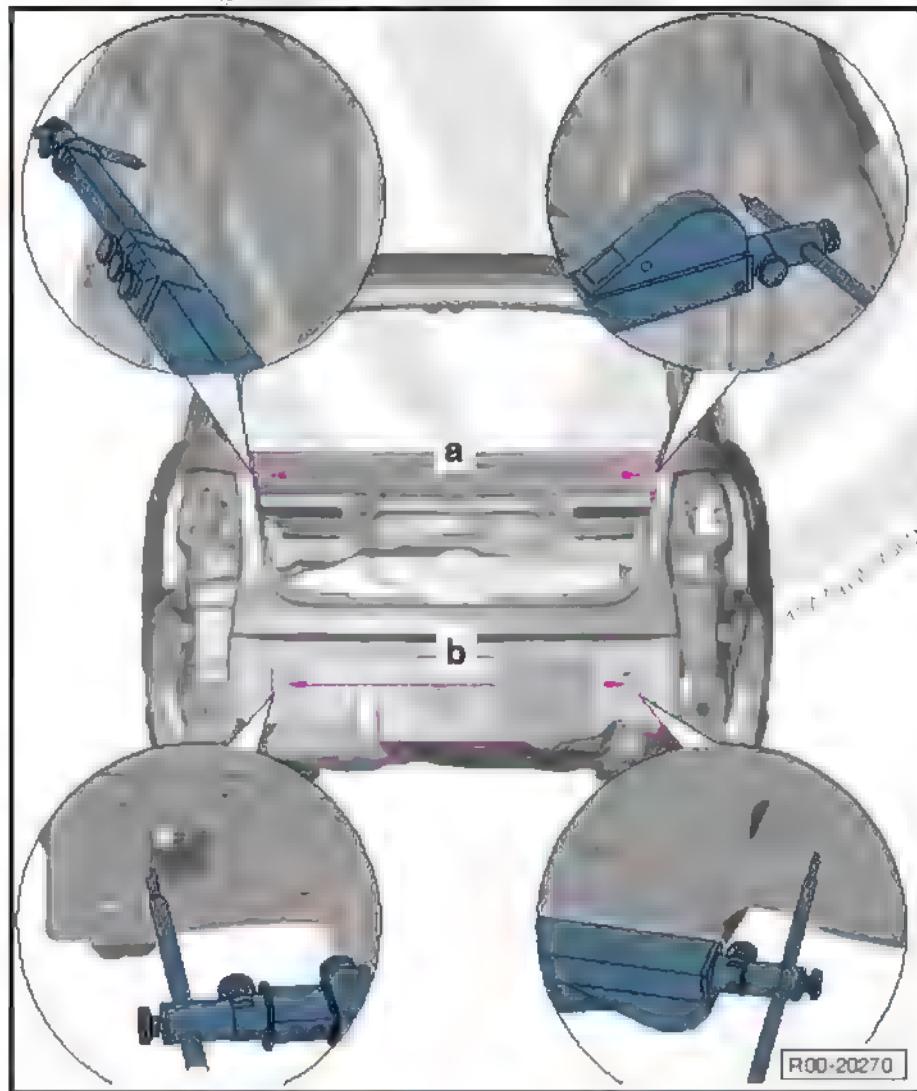
$a = 721 \pm 2\text{mm}$

Distance between the rear side panel points

$b = 1246 \pm 2\text{mm}$



7.3.2 Spacefox

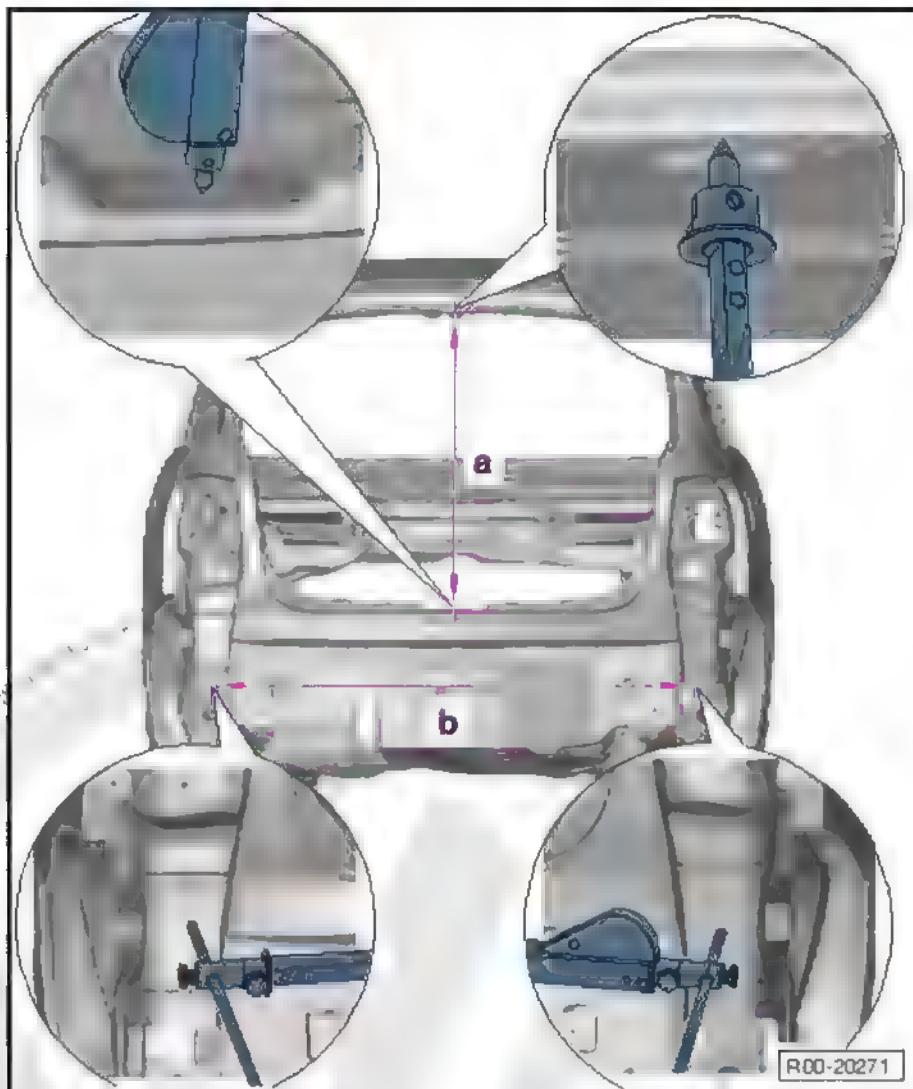


Gap width for boot

$a = 1053 \pm 2\text{mm}$

Distance between the rear cross members

$b = 952 \pm 2\text{mm}$



purposes, in part or in whole

Distance between the closing plate edges and the roof edge (in the vehicle centre)

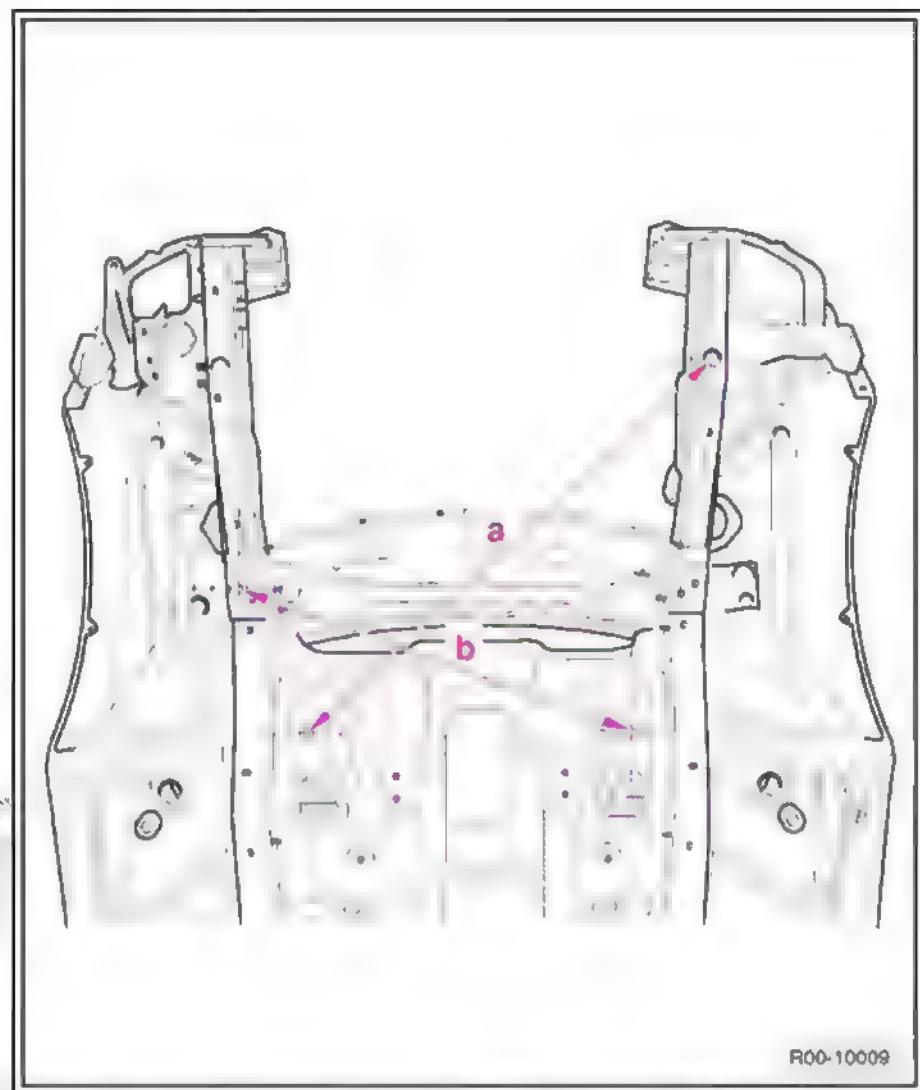
$a = 721 \pm 2\text{mm}$

Distance between the rear side panel points

$b = 1246 \pm 2\text{mm}$



7.4 Body - lower front section

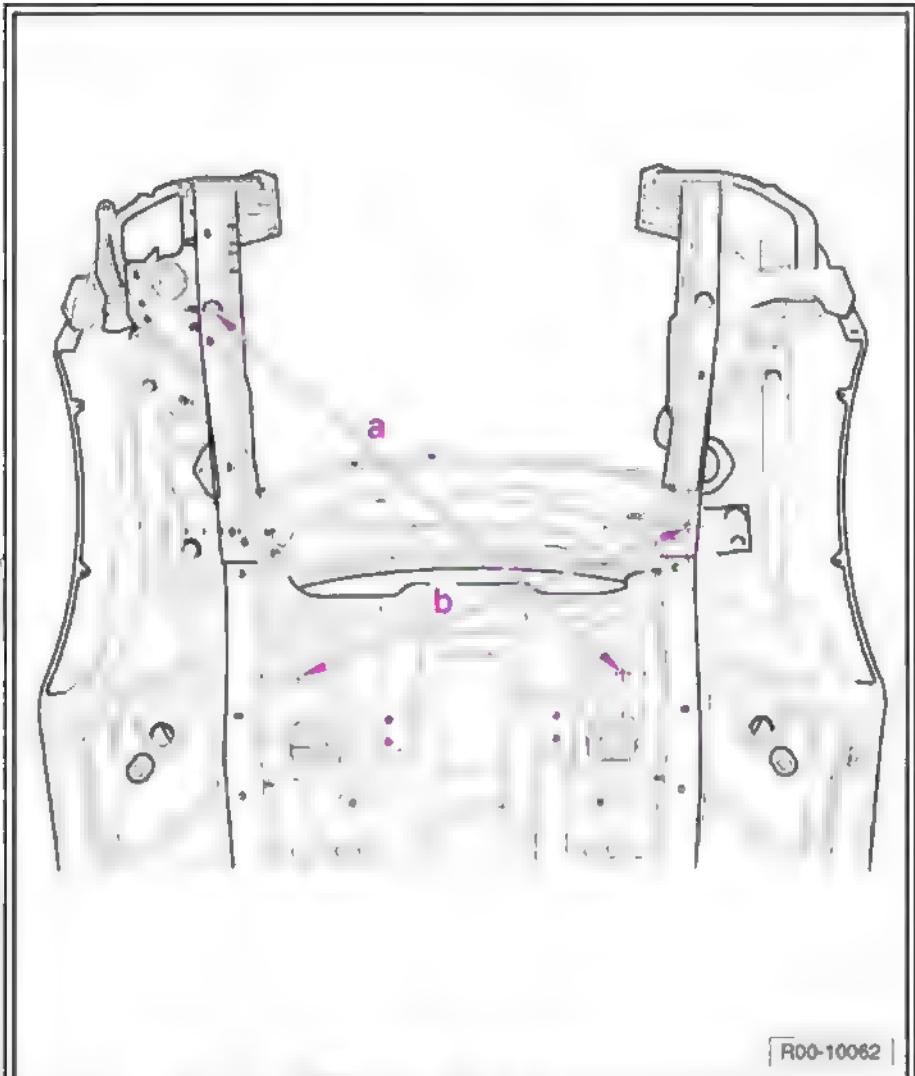


Distance between the right rear fastening point of the sub-frame
and the master hole in the left front longitudinal member

$$a = 970 \pm 1\text{mm}$$

Distance between the left rear fastening point of the sub-frame
and the right front fastening point of the sub-frame

$$b = 741 \pm 1\text{mm}$$

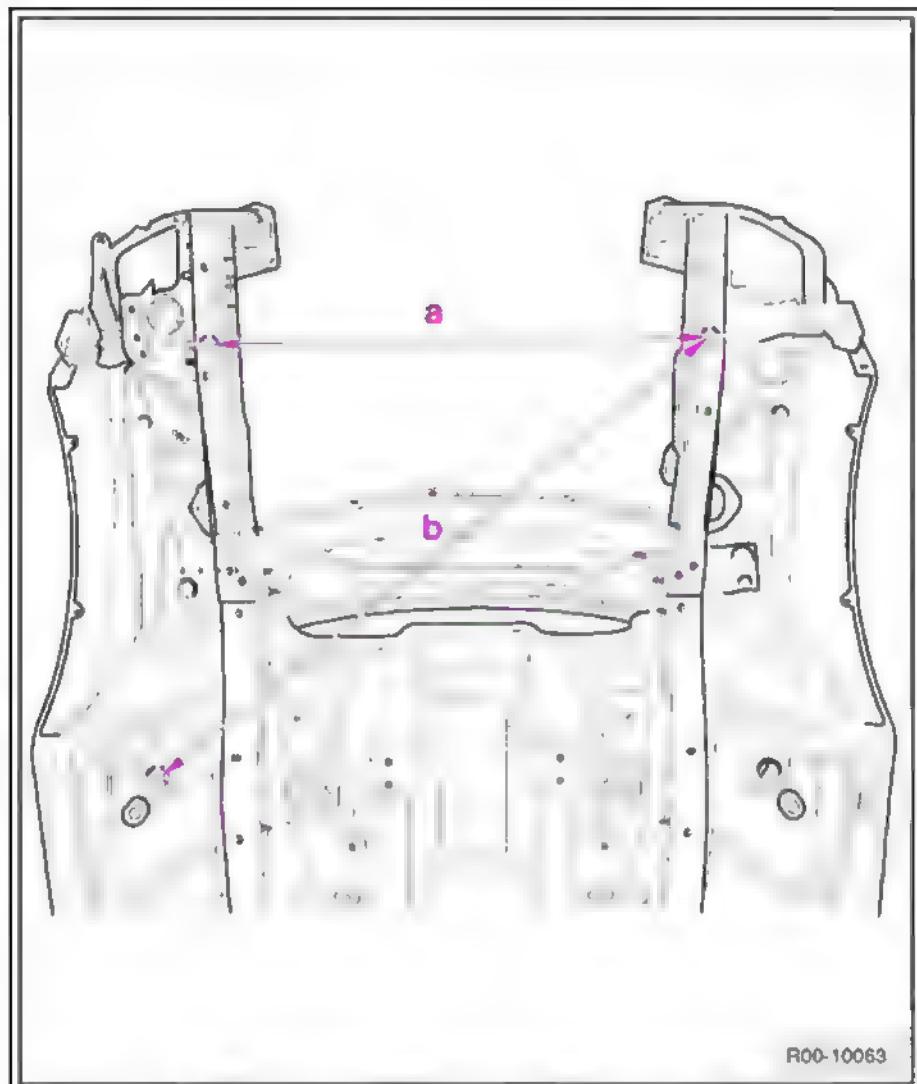


Distance between the left rear fastening point of the sub-frame
and the master hole in the left front longitudinal member

$a = 970 \pm 1\text{mm}$

Distance between the right rear fastening point of the sub-frame
and the left front fastening point of the sub-frame

$b = 741 \pm 1\text{mm}$

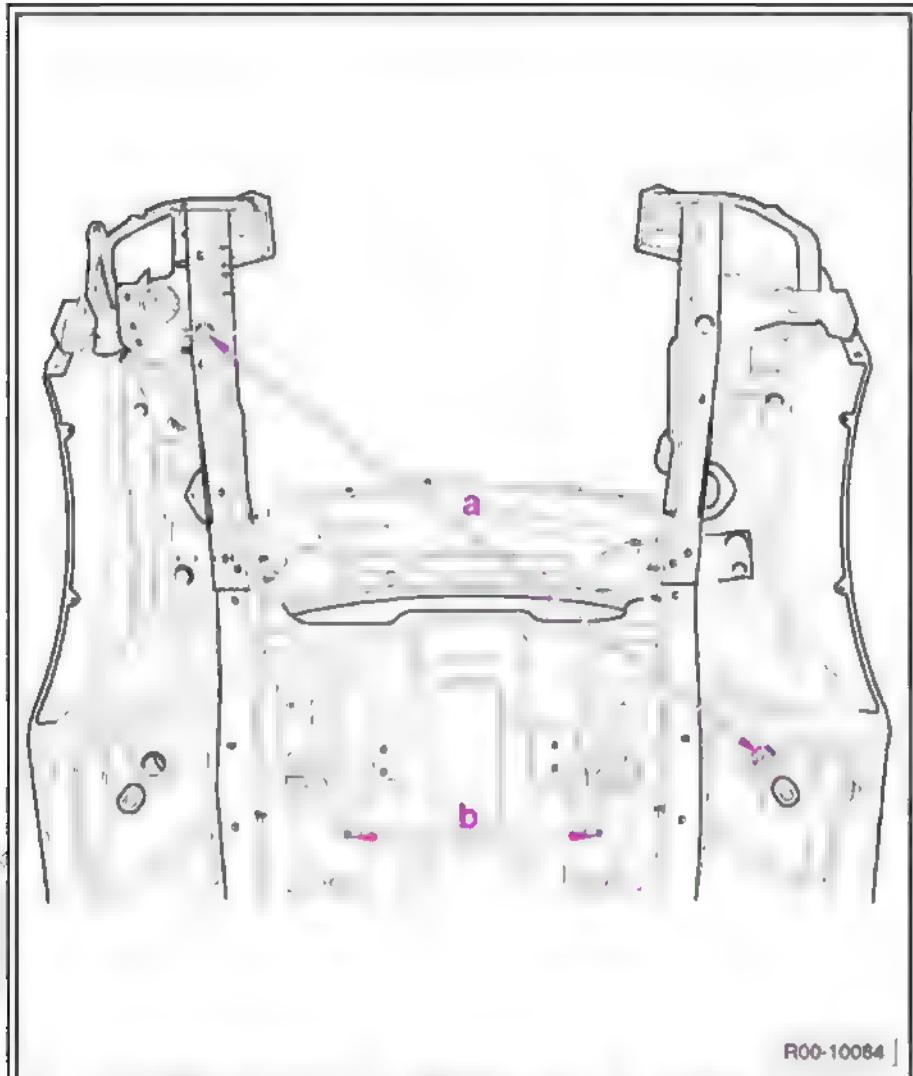


Distance between the front longitudinal members

$$a = 886 \pm 1\text{mm}$$

Distance between the right front longitudinal member and the floor master hole

$$b = 1227 \pm 1\text{mm}$$



Distance between the left front longitudinal member and the floor master hole

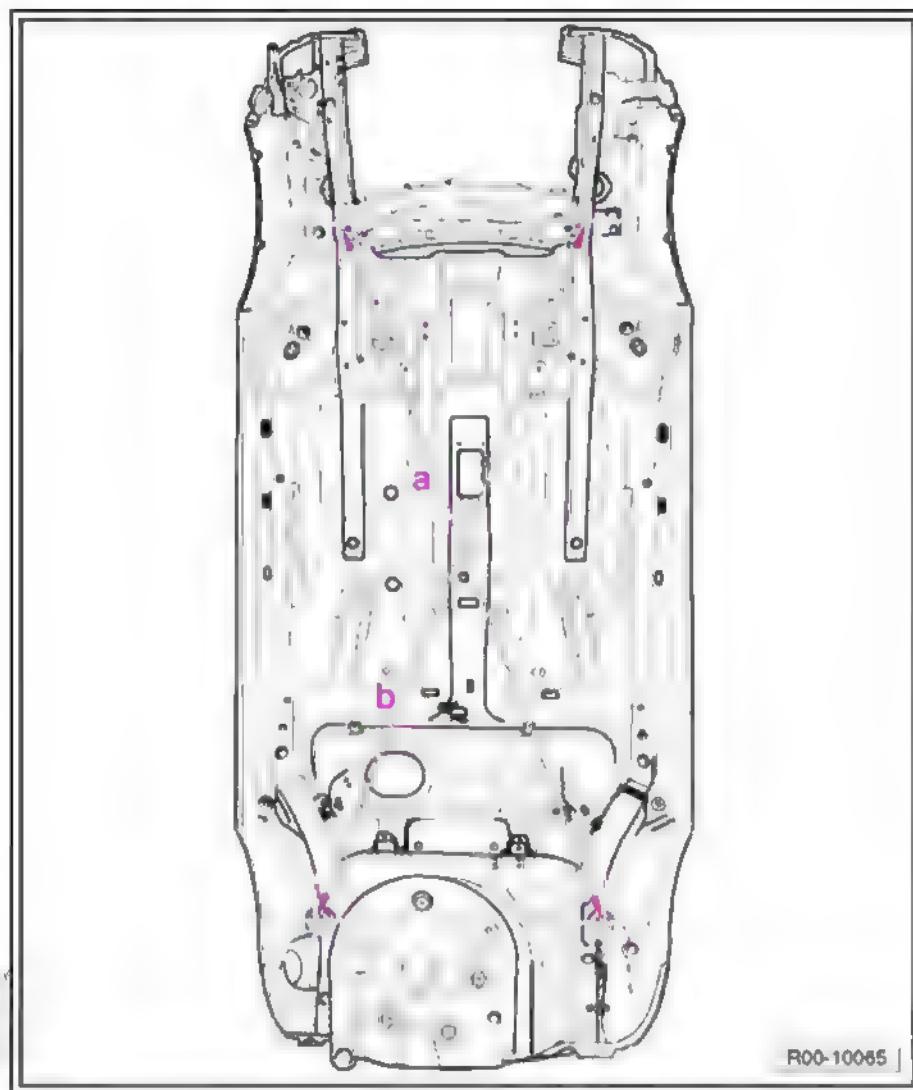
$a = 1227 \pm 1\text{mm}$

Distance between the front longitudinal members

$b = 560 \pm 1\text{mm}$



7.5 Body - lower central section



Distance between the right front longitudinal member and the floor master hole on the rear section (diagonal)

$$a = 2104 \pm 1\text{mm}$$

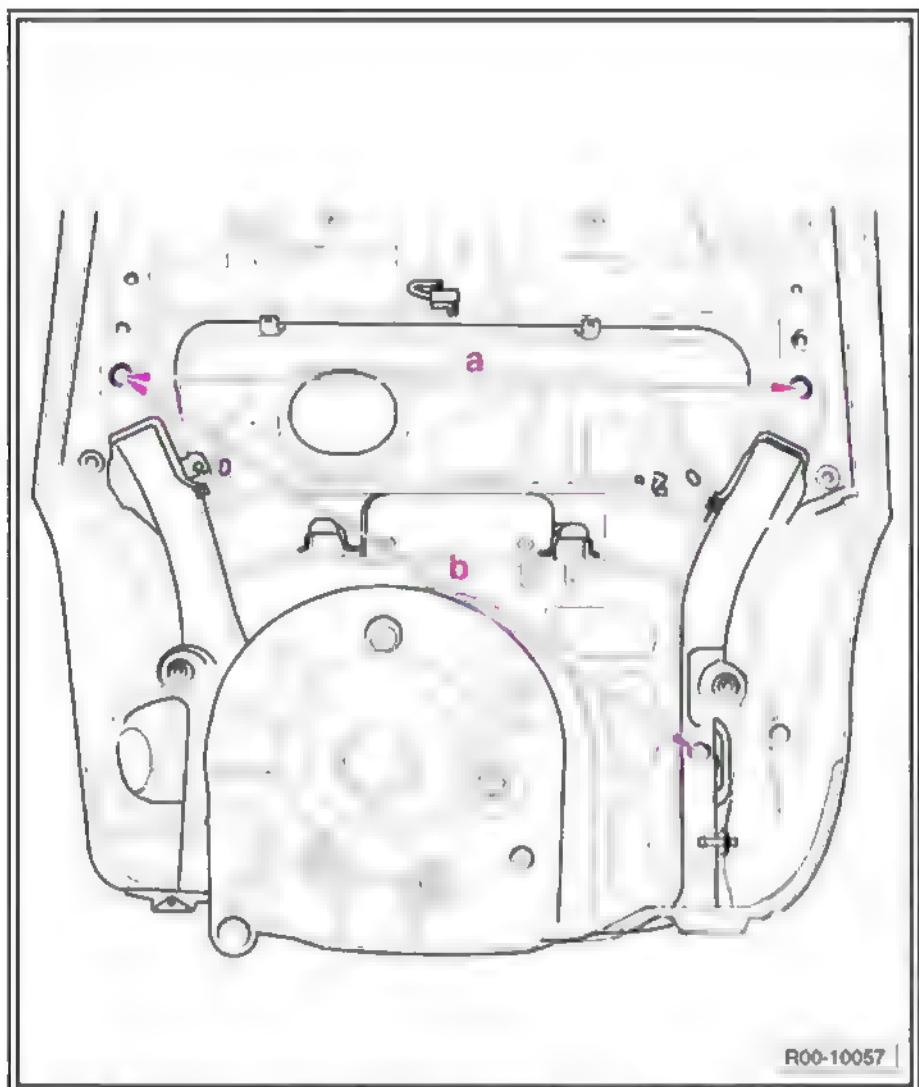
Distance between the left front longitudinal member and the floor master hole on the rear section (diagonal)

$$b = 2104 \pm 1\text{mm}$$



7.6 Body - lower rear section

7.6.1 2 and 4-door Fox

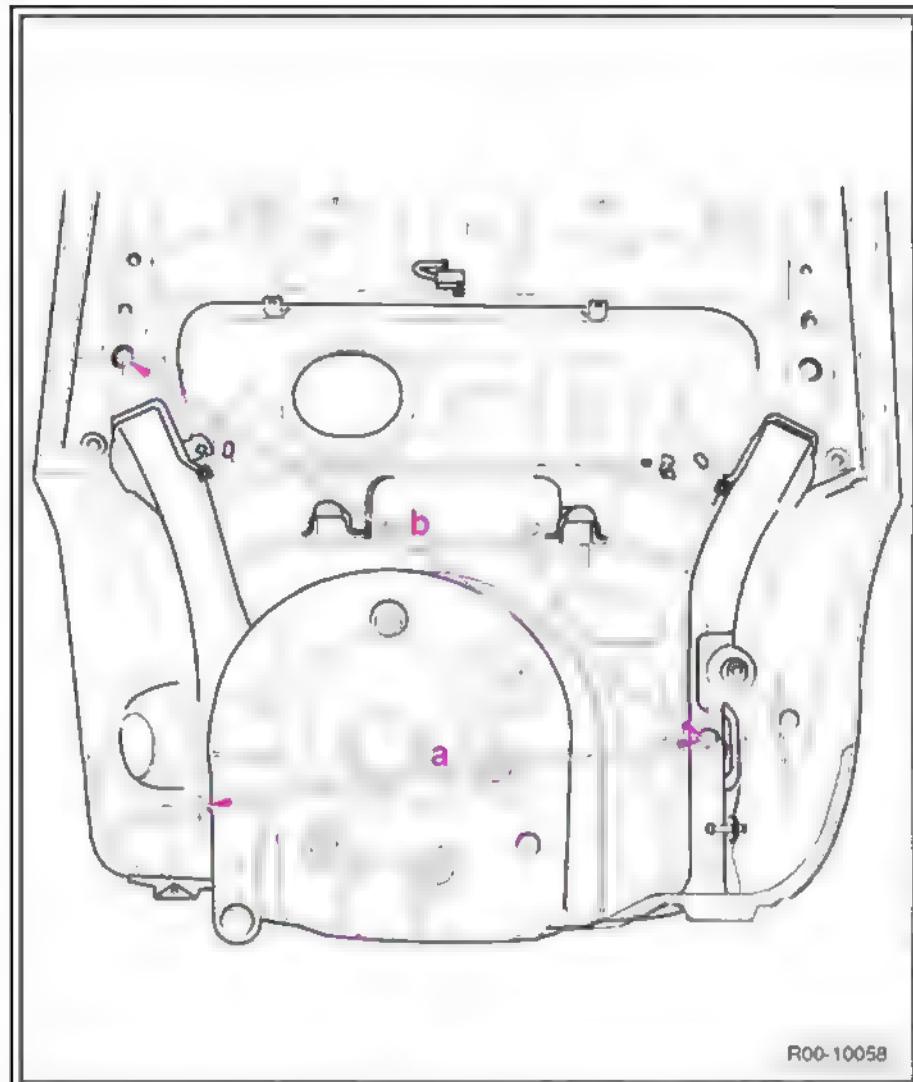


Distance between the master holes on the right rear longitudinal member and on the left rear longitudinal member

$$a = 1220 \pm 1\text{mm}$$

Distance between the right rear longitudinal member and the master hole on the left rear longitudinal member (diagonal)

$$b = 1131 \pm 1\text{mm}$$



Distance between the master holes on the right rear longitudinal member and on the left rear longitudinal member

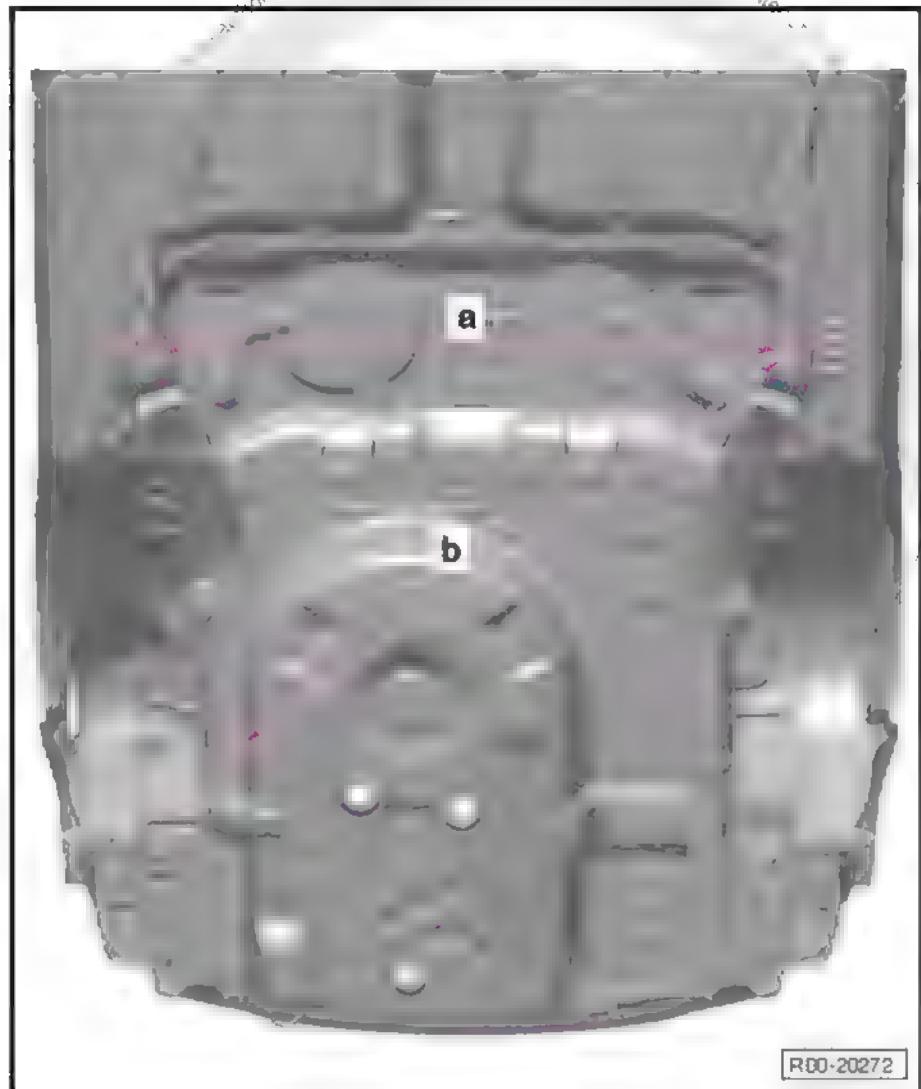
$$a = 890 \pm 1\text{mm}$$

Distance between the master holes on the right rear longitudinal member and the master hole on the left rear longitudinal member (diagonal)

$$b = 1135 \pm 1\text{mm}$$



7.6.2 Spacefox

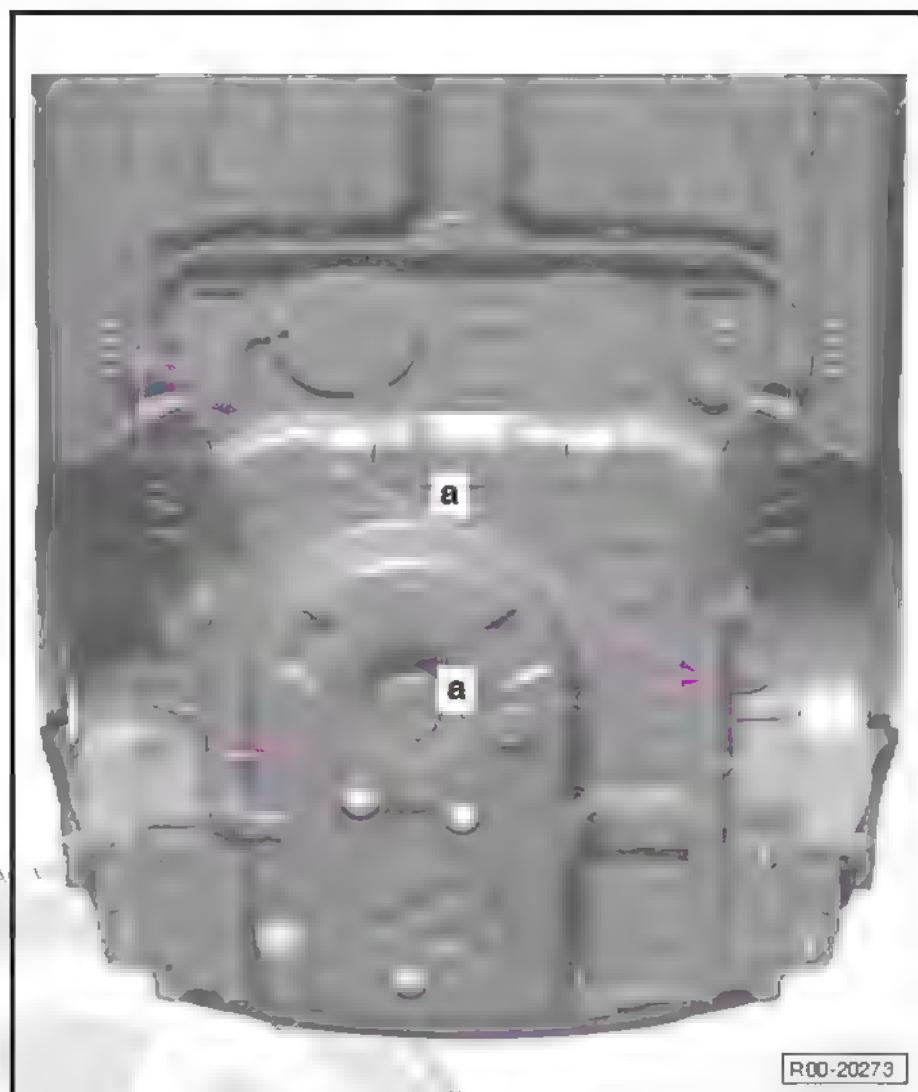


Distance between the master holes on floor

$$a = 1220 \pm 1\text{mm}$$

Distance between the hole on left rear longitudinal member and
the master hole on the rear floor (diagonal)

$$b = 1353 \pm 1\text{mm}$$



Distance between the hole on right longitudinal member and the master hole at rear

$$a = 1316 \pm 1 \text{ mm}$$

Distance between the master holes on floor

$b = 902 \pm 1\text{mm}$



8 Alignment platform

8.1 Overview



Note

- ◆ *RW = Alignment platform*
- ◆ *The position numbers in the figure are identical to the final numbers on the alignment platform*
- ◆ *The size of the basic set required is always indicated for the alignment platform.*
- ◆ *VAS 5224/1 e VAS 5224/4 - Alignment platform*
- ◆ *VAS 5224/3 Part set for Fox Crossfox.*
- ◆ *In the following figures, the right side of the vehicle is shown.*

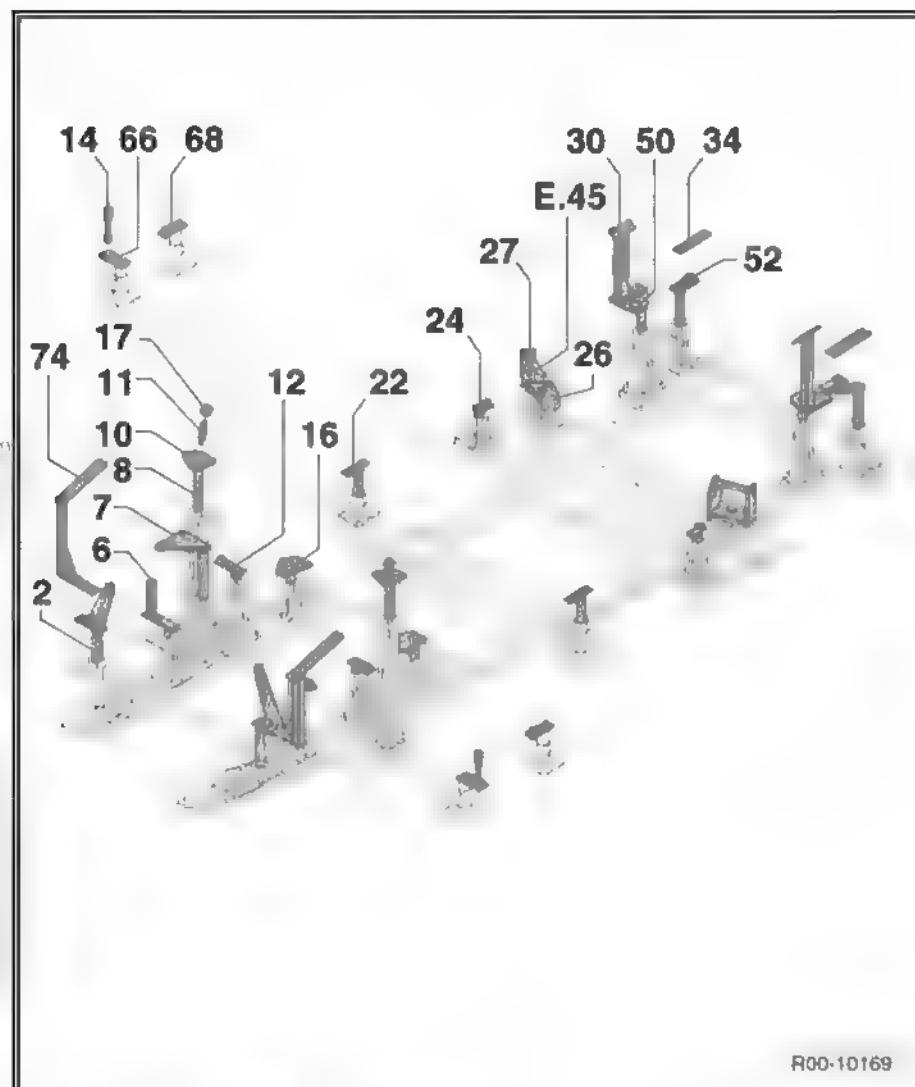


DANGER!

When placing the vehicle on the alignment platform, you must avoid damages to the complementary parts, remove the damaged complementary parts, such as, for example, wheel case protectors, bumper, wheels.



2 - MZ 142
6 - MZ 140
7 - MZ 260
8 - MZ 602
10 - belongs to pos. 8
11 - belongs to pos. 8
12 - MZ 260
14 - belongs to pos. 66 (Fox Crossfox)
16 - MZ 140
17 - belongs to pos. 8
22 - MZ 080
24 - MZ 140
26 - MZ 080
27 - belongs with E45 to pos. 26
30 - belongs to pos. 50
34 - belongs to pos. 52
50 - MZ 260 with pos 30
52 - MZ 200
66 - MZ 080 (Fox Crossfox)
68 - MZ 080 (Fox Crossfox)
74 - belongs to pos. 2



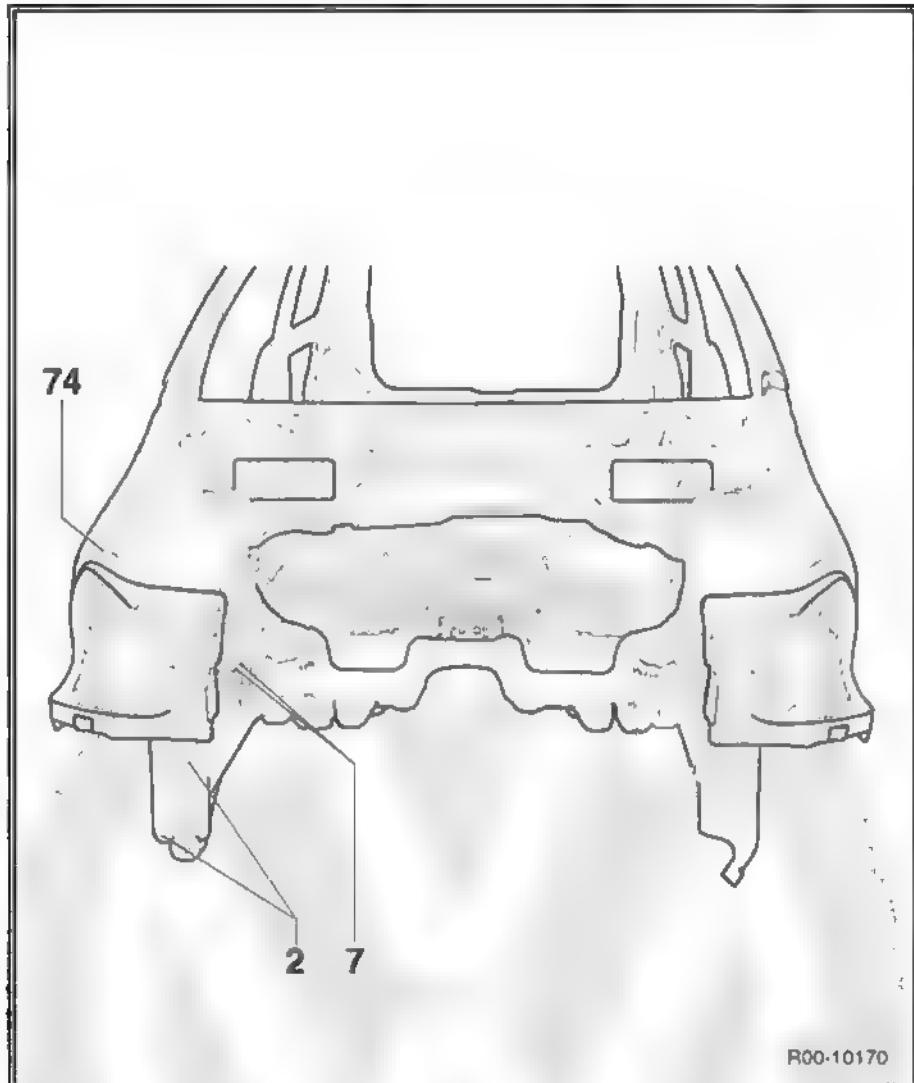


8.2 General view of the front section alignment platform positions

2 - Bumper support point

7 - Engine cushion support point

74 - Point of the upper longitudinal member

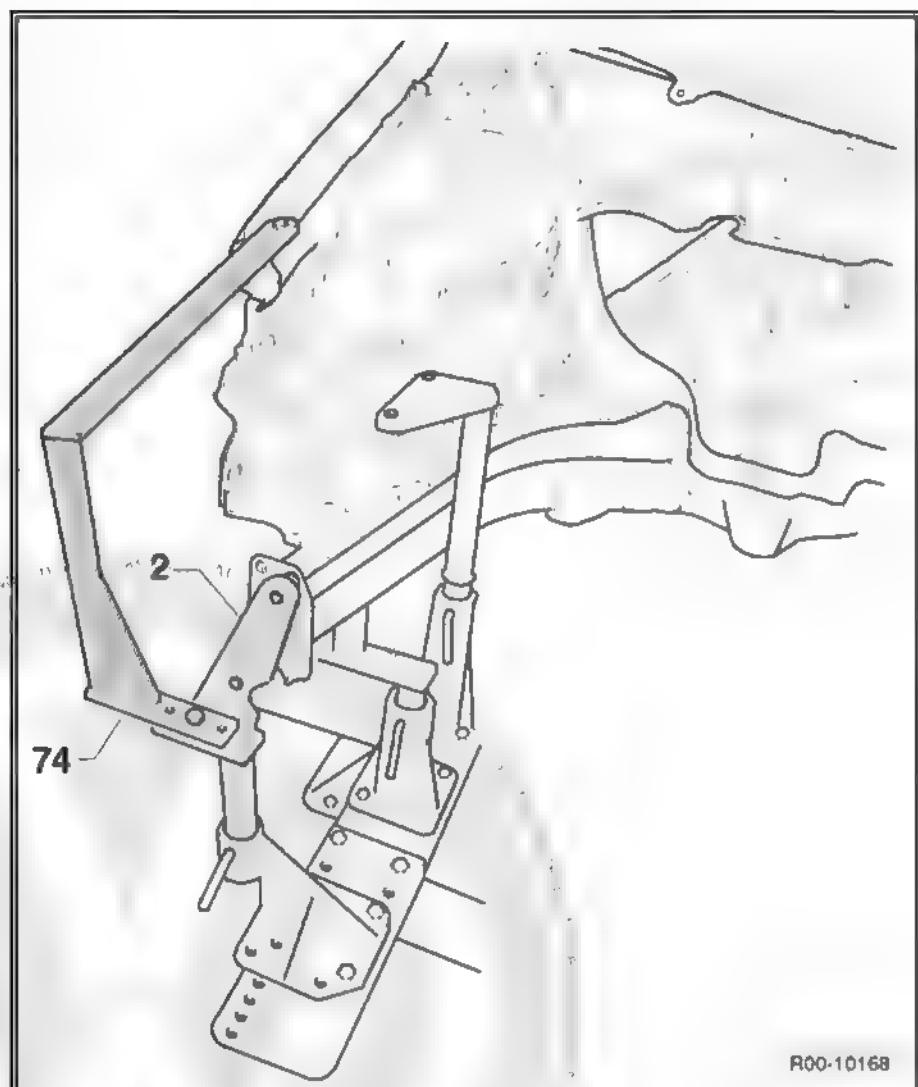




2 - Bumper support

7 - Engine cushion support

74 - Upper longitudinal member



R00-10168

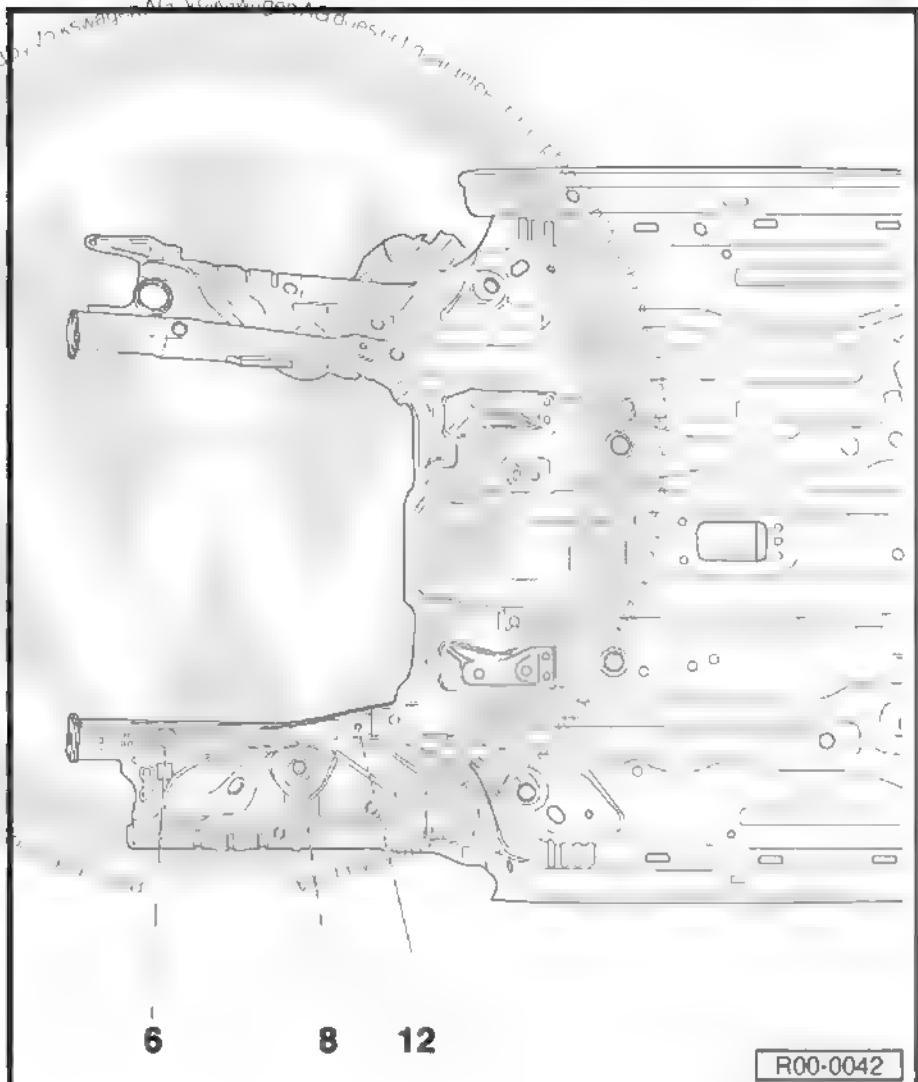


6 - Front longitudinal member support point

8 - Support point for suspension support

12 - Support point for the front sub-frame

66 and 14 for Fox Cross-fox



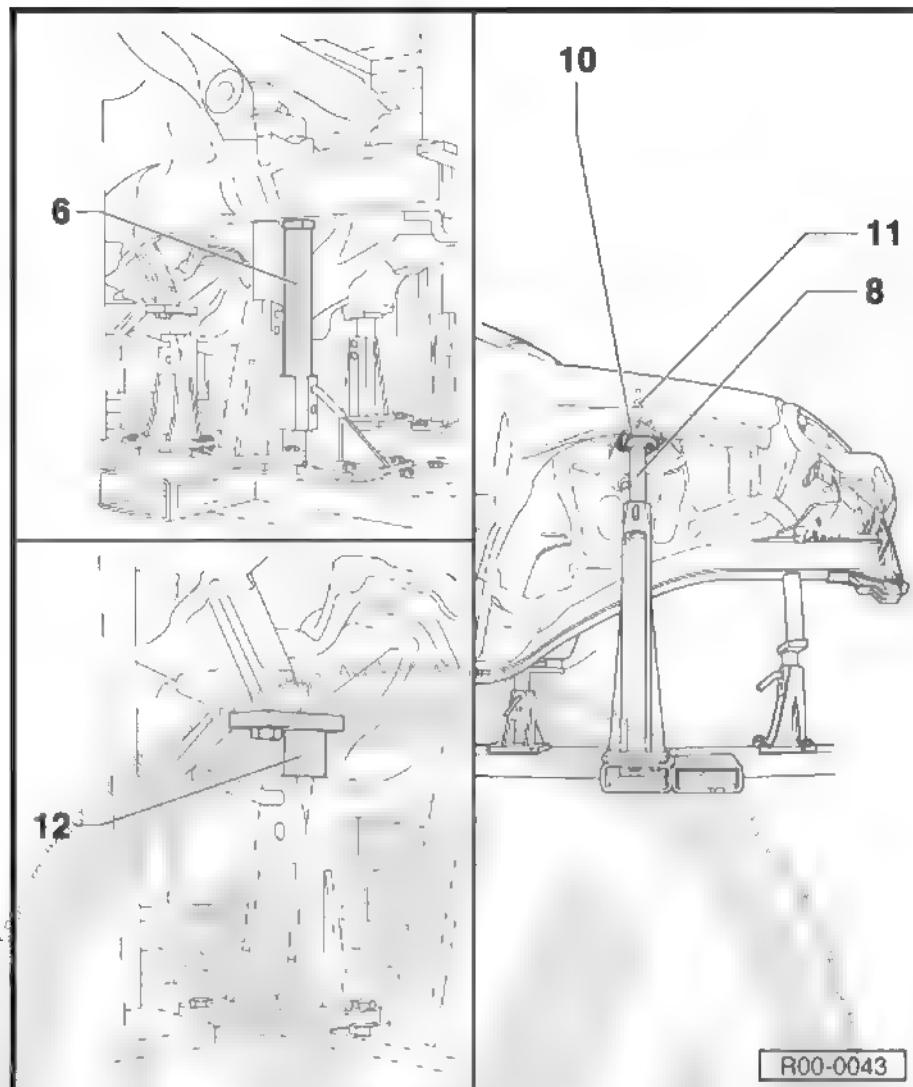


6 - Front longitudinal member support

8 - Support for centralization part -11- and drilling device -10- for suspension support

12 - Support for front sub-frame

66 and 14 for Fox Cross-fox





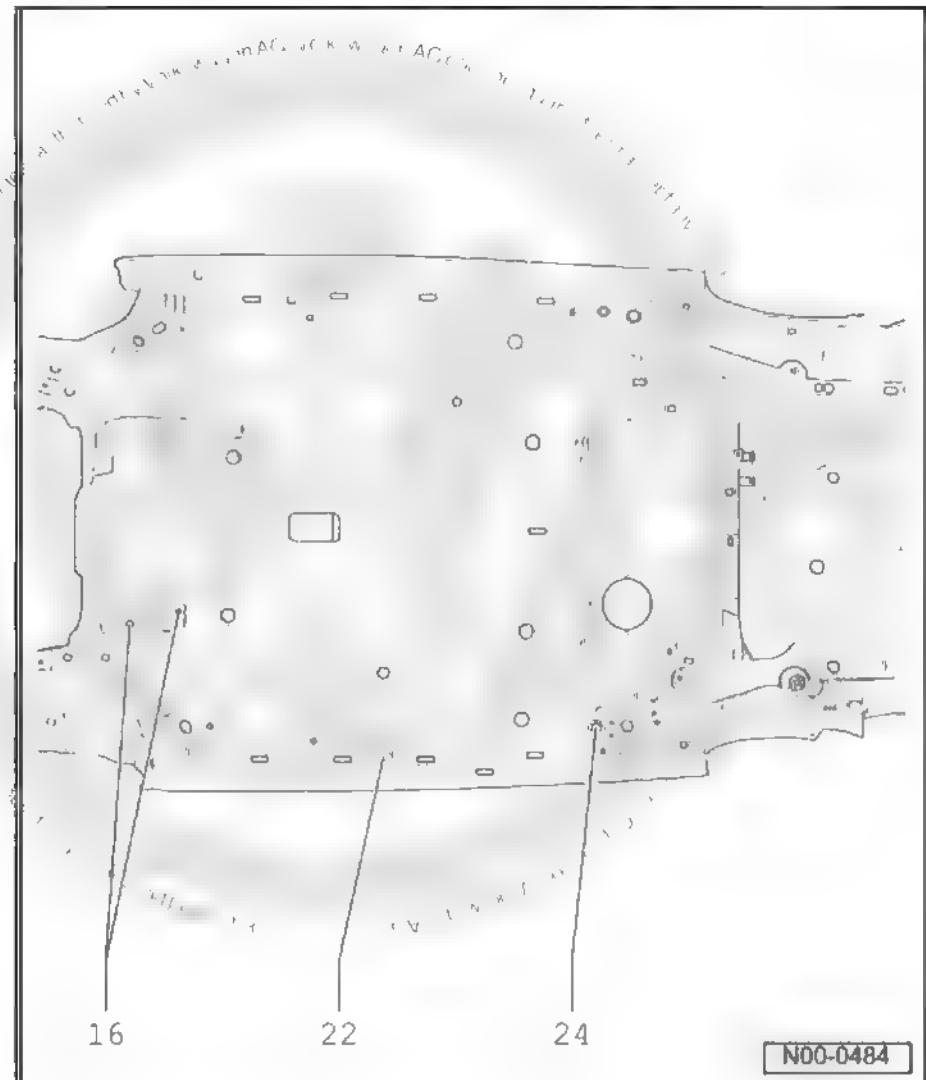
8.3 General view of the central section alignment platform positions

16 - Support point for the rear sub-frame

□ 68 for Fox Crossfox

22 - Floor plate support point (lower section)

24 - Support point on the rear longitudinal member



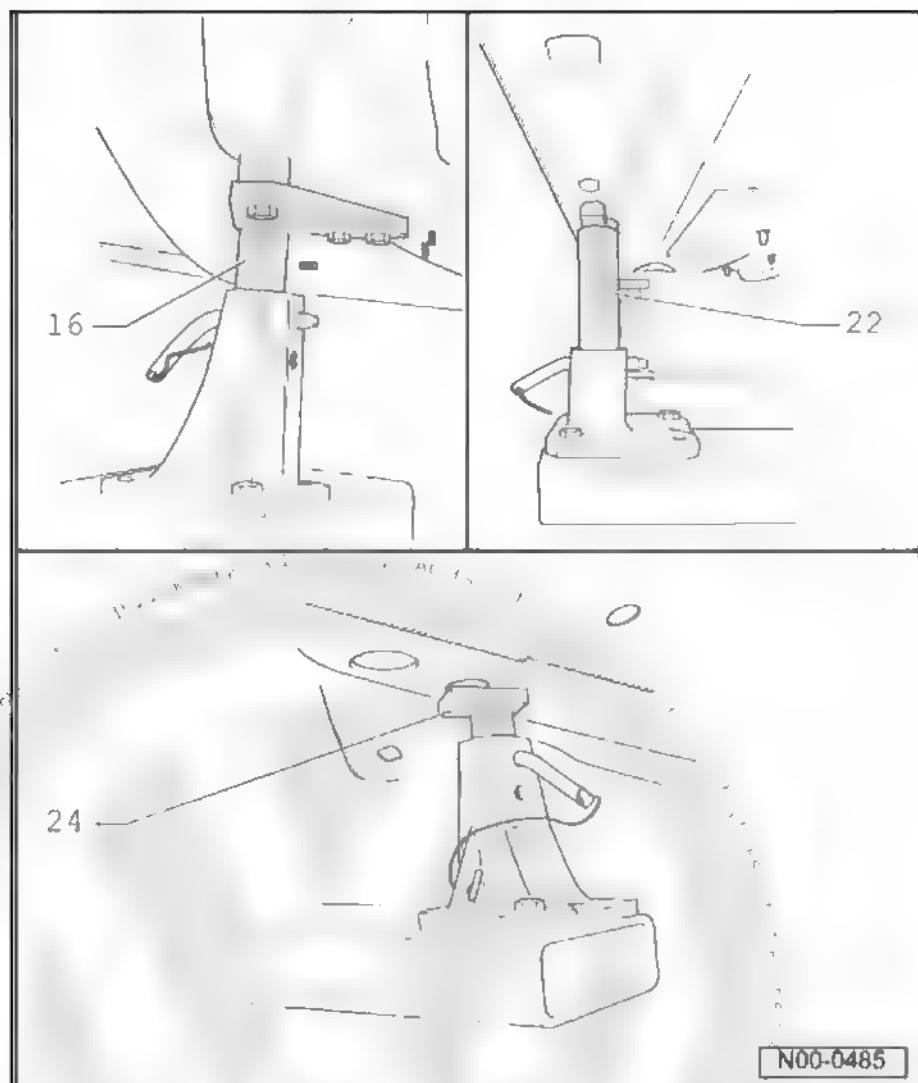


16 - Support for rear sub-frame support

□ 68 for Fox Crossfox

22 - Floor plate support (lower section)

24 - Support for rear longitudinal member drilling



8.4 General view of the rear section alignment platform positions

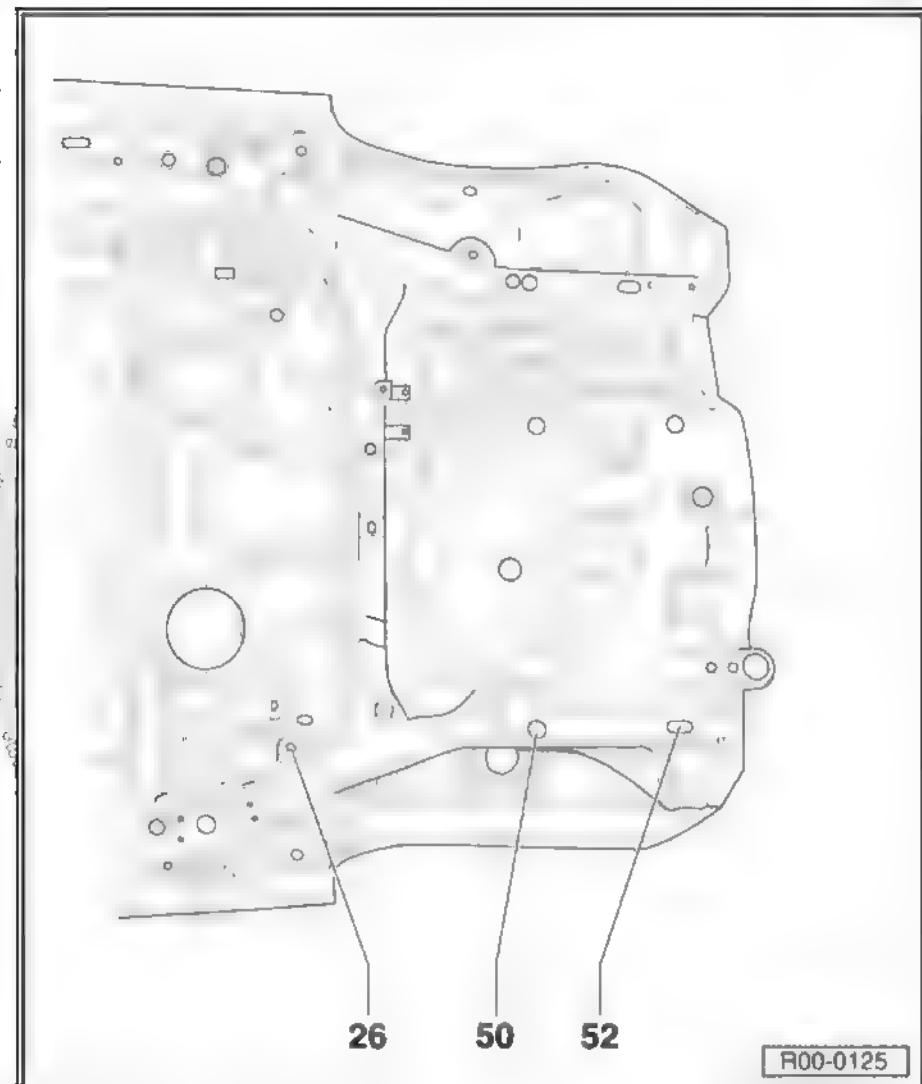
2 and 4-door Fox



26 - Rear axle fastening support point

50 - Rear longitudinal member support point

52 - Rear longitudinal member support point



R00-0125

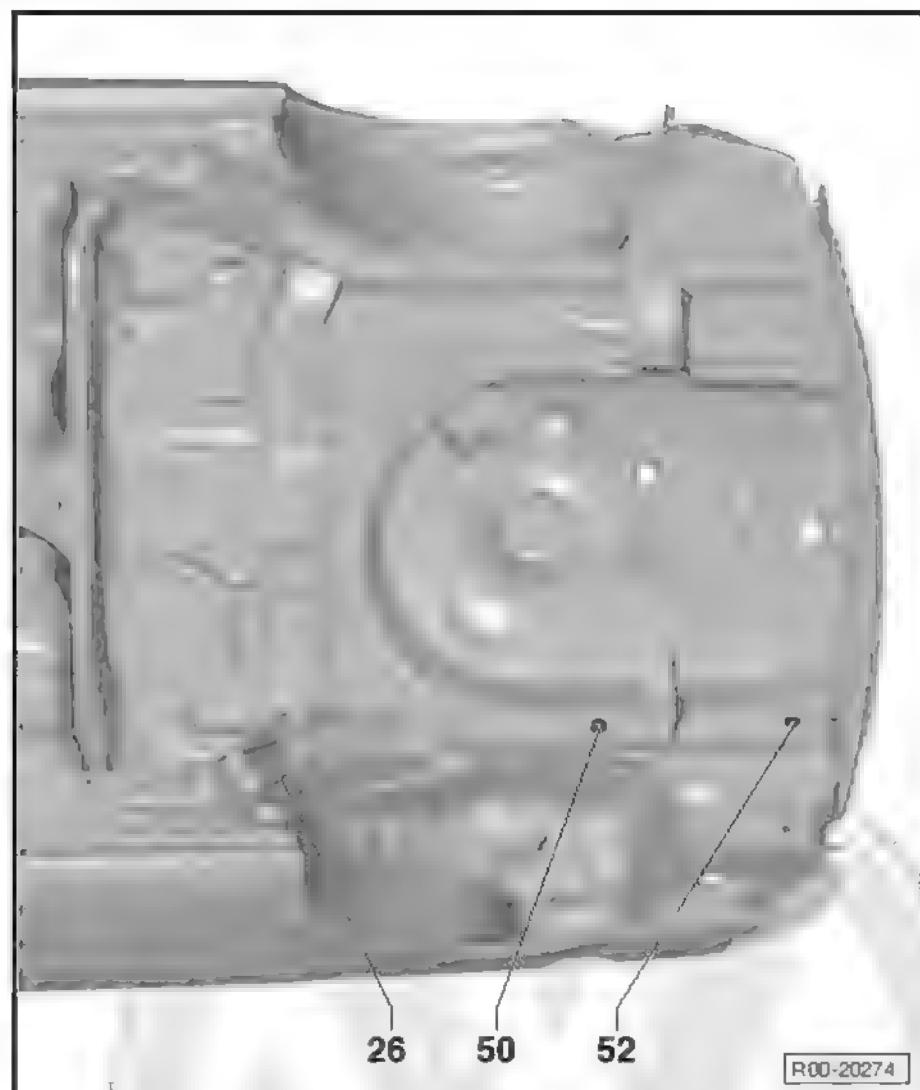
Spacefox



26 - Rear axle fastening support point

50 - Rear longitudinal member support point

52 - Rear longitudinal member support point





26 - Rear axle fastening support (use also pos. -27-)

27 - Rear axle fastening support

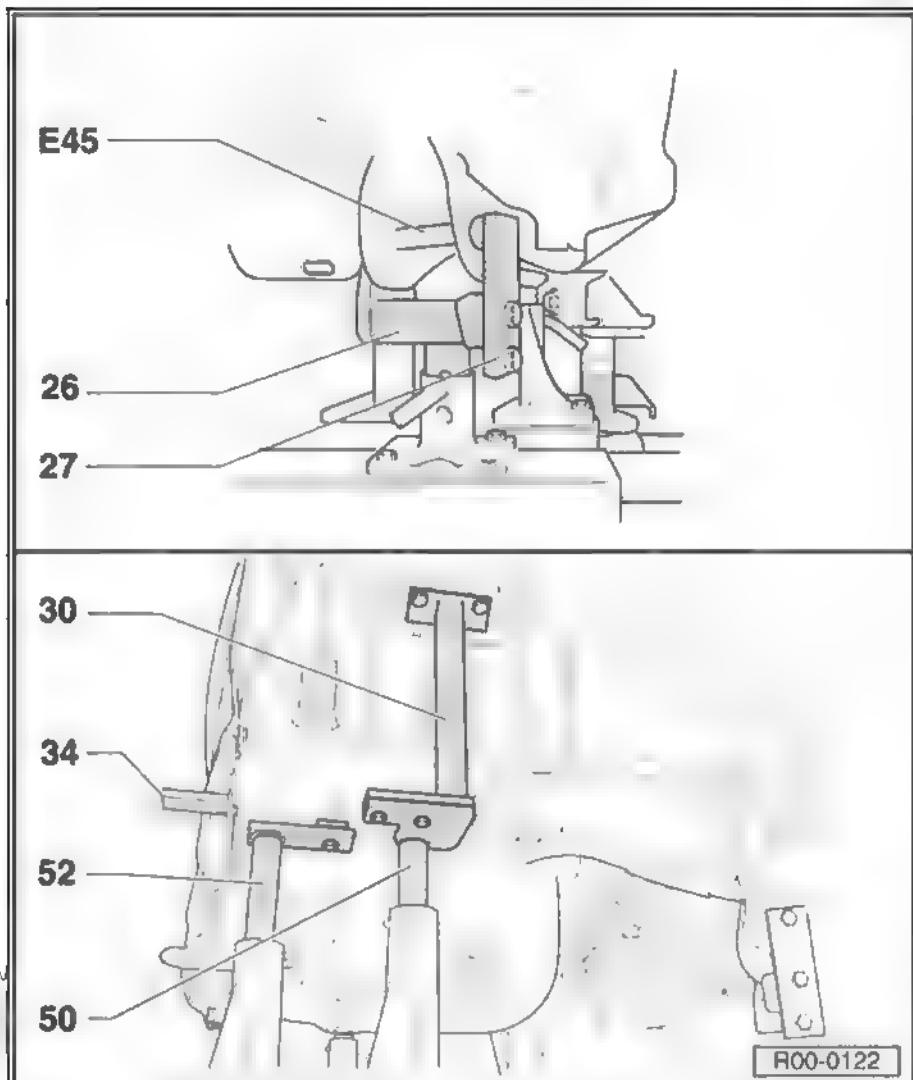
(only use pos. -E45- with the rear axle removed)

50 - Rear longitudinal member drilling support (use also pos. -30-)

30 - Counter-holder for pos. -50-

52 - Rear longitudinal member drilling support (use also pos. -34-)

34 - Counter-holder for pos. -52-





50 – Body - front

RO 50 40 55 00

1 Engine support (right side) - replace



DANGER!

Follow the safety instructions!

⇒ General Information: Body Repairs, General Body Repairs ;
Safety Instructions

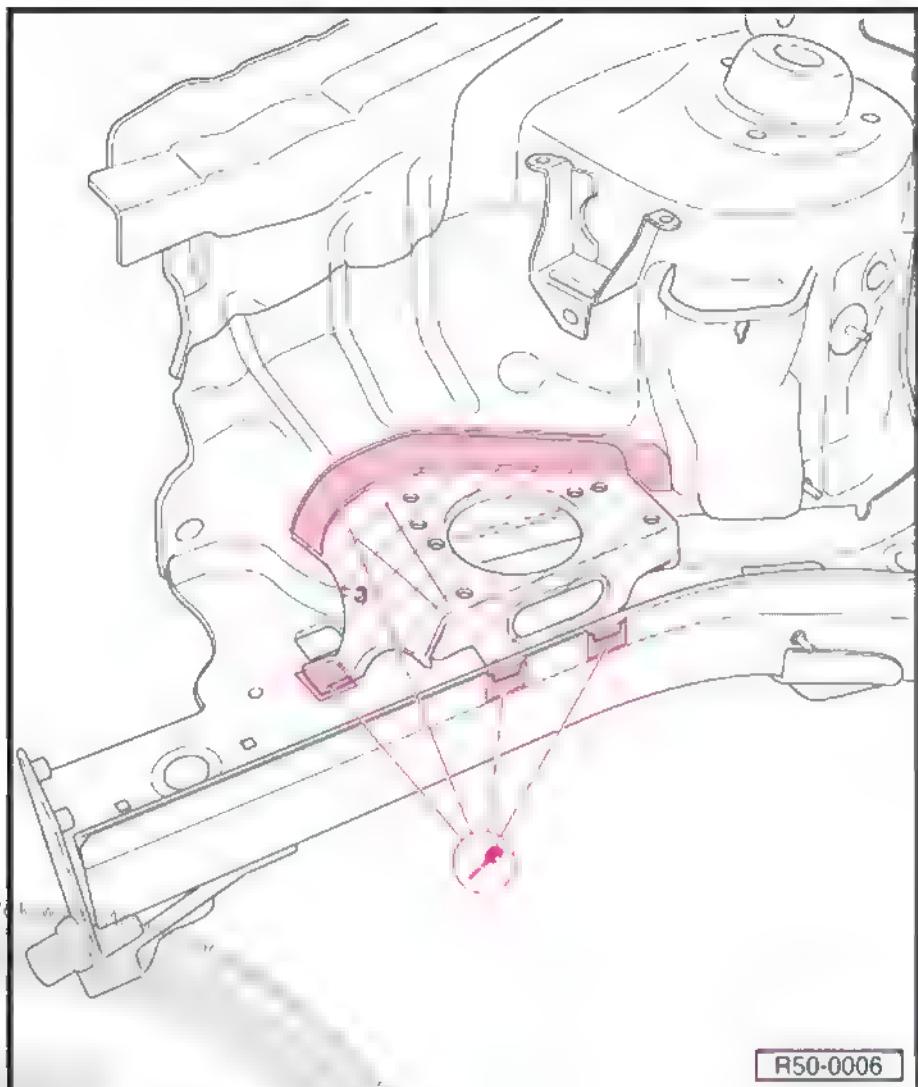
1.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

1.2 Remove



- Undo plate connections.
- Remove plate residues.

1.3 Install



Note

Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [⇒ page 72](#).

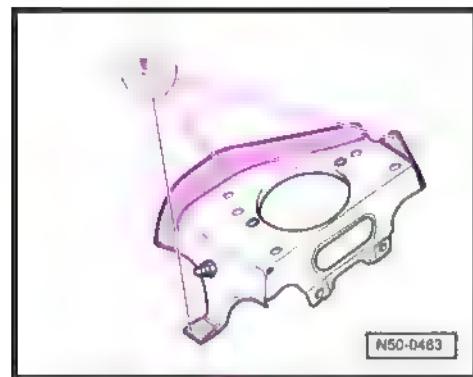
1.3.1 Prepare the new part

Replacement part

◆ Engine support right side

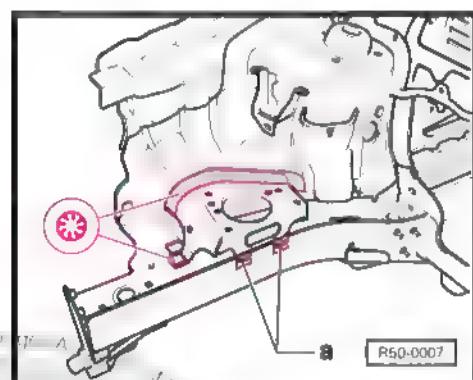


- Drill the new part.



1.3.2 Welding

- Position the new part with the vehicle supported by its wheels or under the alignment platform.
- Weld the engine support, SG - hole fulfilment seam - (SG Hole welding - spot weld with MIG welding spots).
- Weld the welding spots -a- from the outside, SG - hole fulfilment seam - (SG Hole welding - spot weld with MIG welding spots).





RO 50 41 55 00

2 Suspension shims (Crossfox ► 05.13 and Space Cross / Suran Cross) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ; Safety Instructions

2.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

2.2 Remove



- Reduce the weld beads around the wedges.
- Remove the wedges.
- Remove the residue of the weld beads.

2.3 Install



Note

Protected by copyright. Copying prohibited.
Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [page 75](#)

2.3.1 Prepare the new part

Replacement part

- ◆ Front wedge - 5Z0 804 931.A
- ◆ Central wedge - 5Z0 804 909
- ◆ Rear wedge - 5Z0 804 910



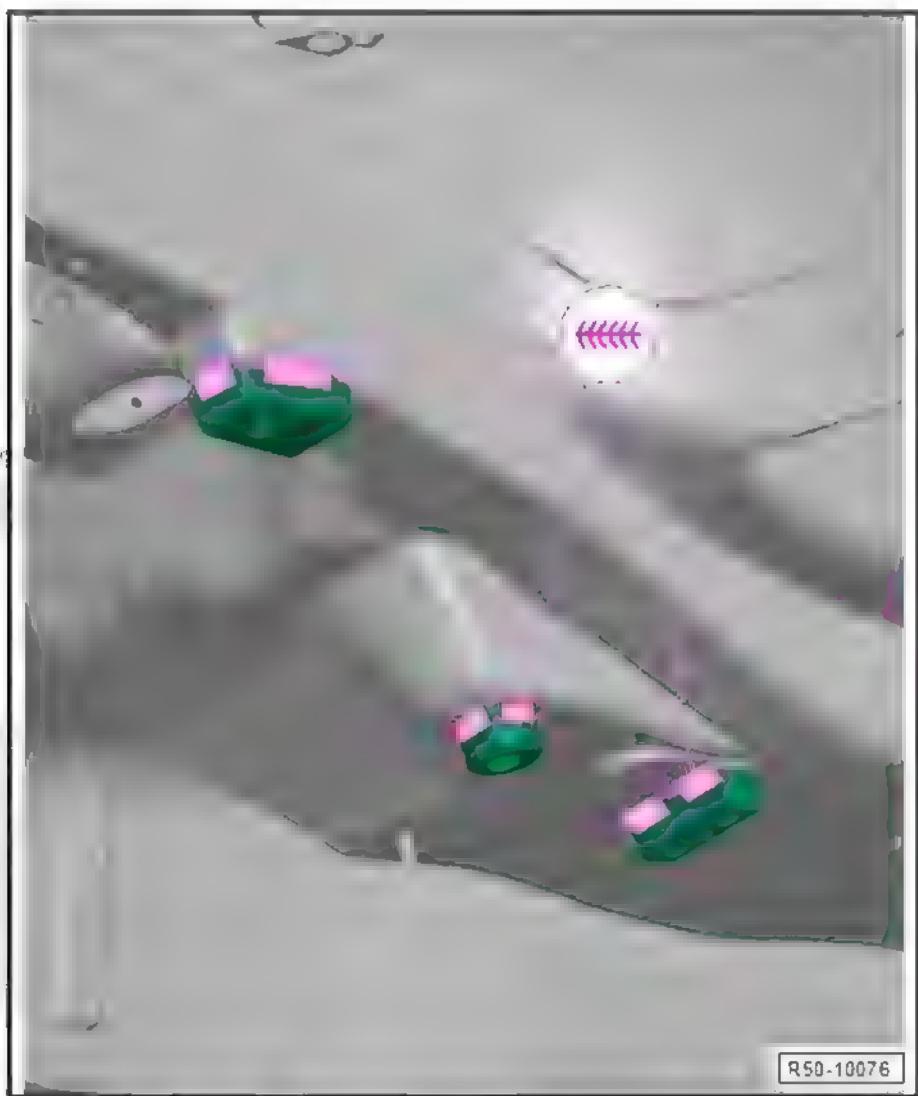
2.3.2 Welding



Note

As of chassis 4CA504548 (Space Cross) and 5C4054709 (Crossfox), the rear shim -5Z0 804 910- is no longer assembled.

- Place the wedges in the vehicle, aligning them with the fastening holes of the auxiliary frame support



- Weld the wedges in the longitudinal member, SG - continuous seam - (Continuous SG weld - MIG weld beads).



RO 50 43 55 00

3 Auxiliary frame support - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

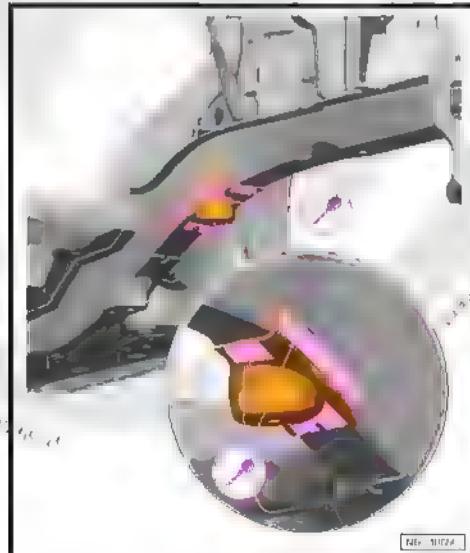
3.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

3.2 Remove





- Undo plate connections.
- Remove plate residues.



3.3 Install



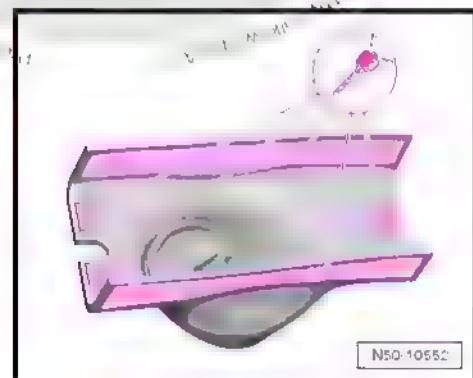
Note

Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [⇒ page 78](#)

3.3.1 Prepare the new part

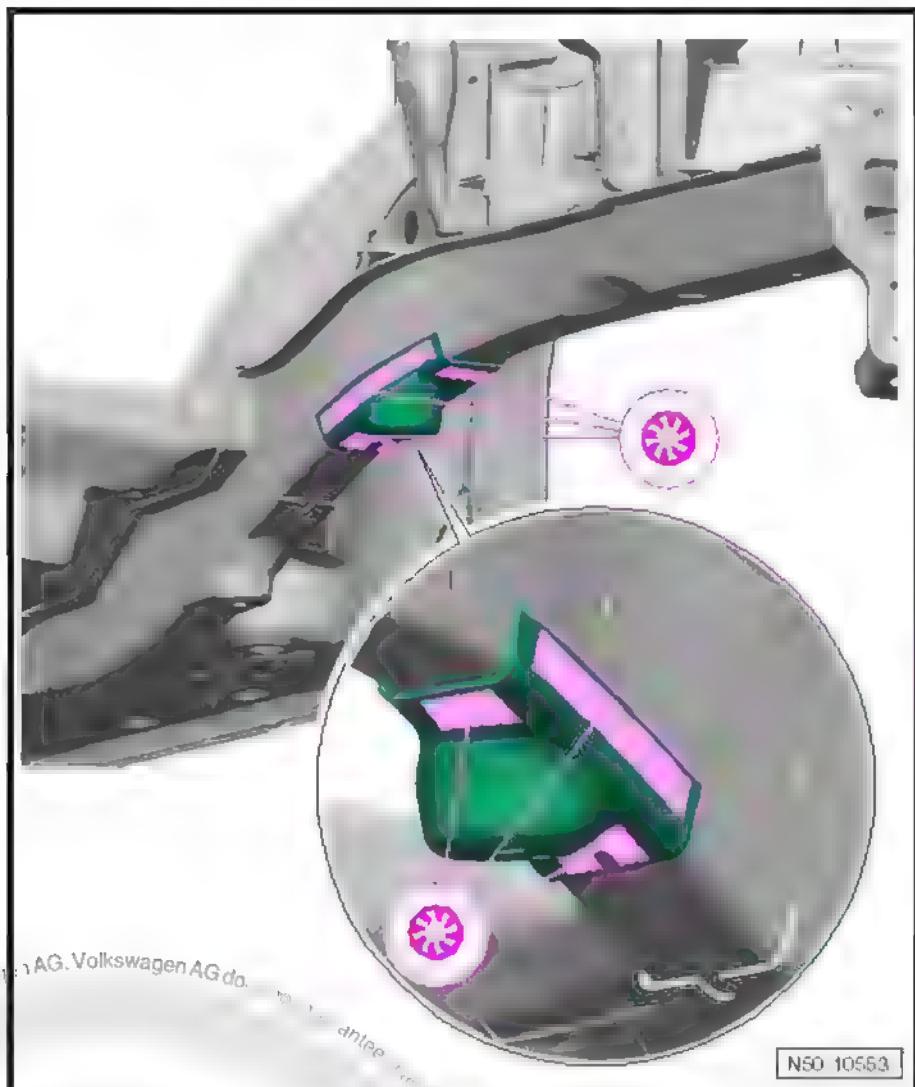
Replacement part

- ◆ Auxiliary frame support
- Drill the new part with holes for SG seam, Ø 7 mm.



3.3.2 Welding

- Adjust the new part with the vehicle supported by its wheels or on the alignment platform.



- Weld the support, SG - hole fulfilment seam.



RO 50 53 55 50

4 Wheel arch upper longitudinal member - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

4.1 Tools

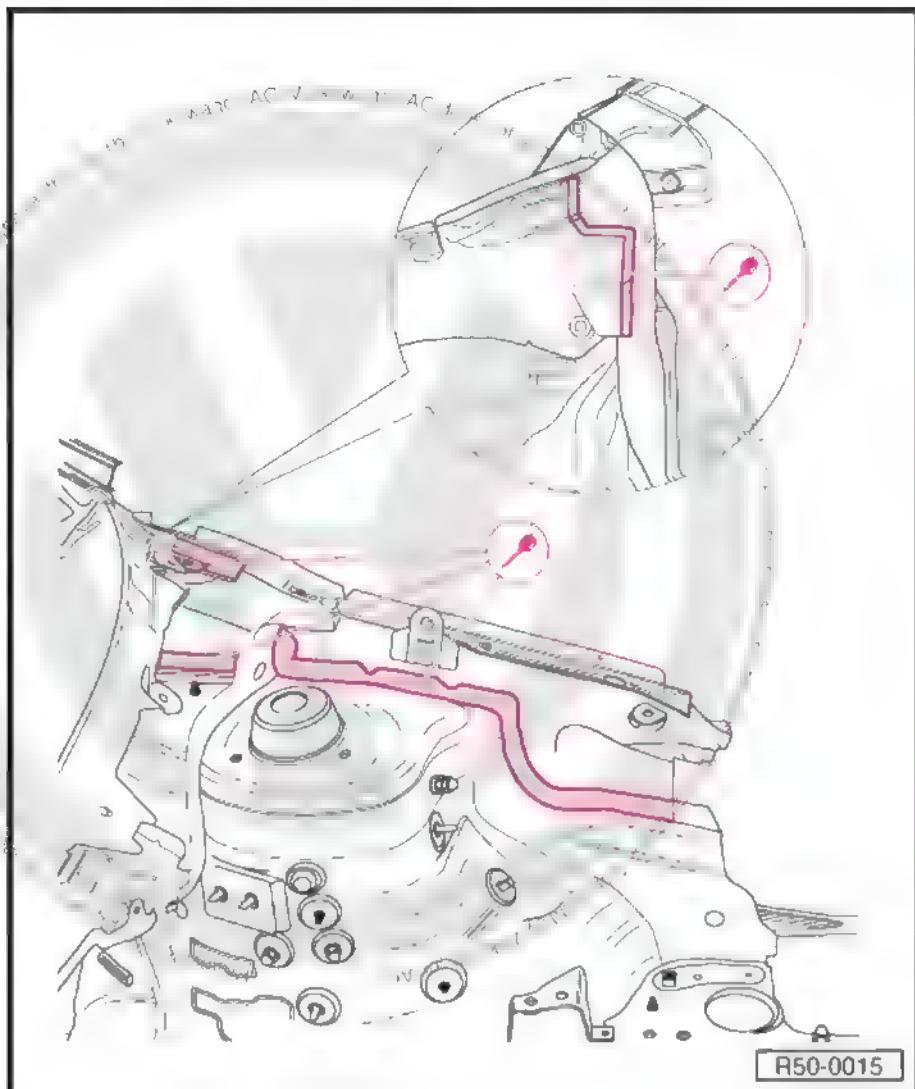


Note

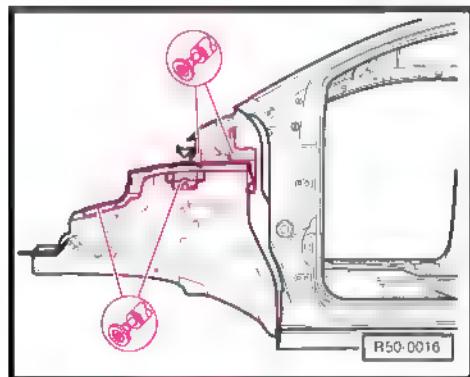
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

4.2 Remove

- Wheel arch upper longitudinal member reinforcement removed.



- Undo plate connections of upper longitudinal member with wheel arch and A-pillar.
- Remove plate residues.





4.3 Install



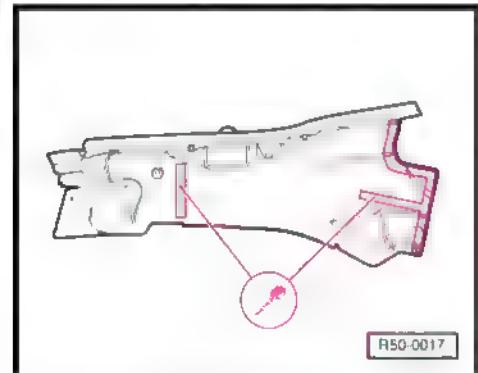
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
→ [page 81](#)
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ *General Information; Body Repairs, General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding*

4.3.1 Prepare the new part

Replacement part

- ◆ Wheel arch upper longitudinal member
- ◆ Foam part/support
- ◆ 1K Assembly adhesive - D 190 MKD A3- (1 cartridge)
- Make 8-mm holes in the indicated area.



4.3.2 Moulded foam parts

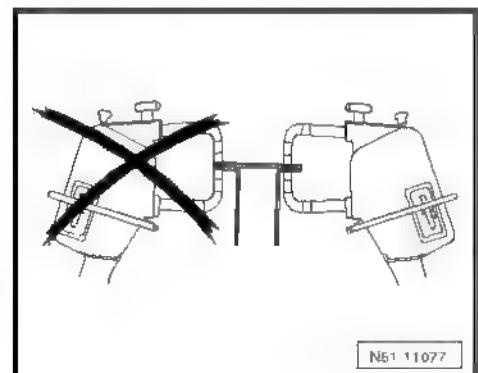
Follow the repair instructions .

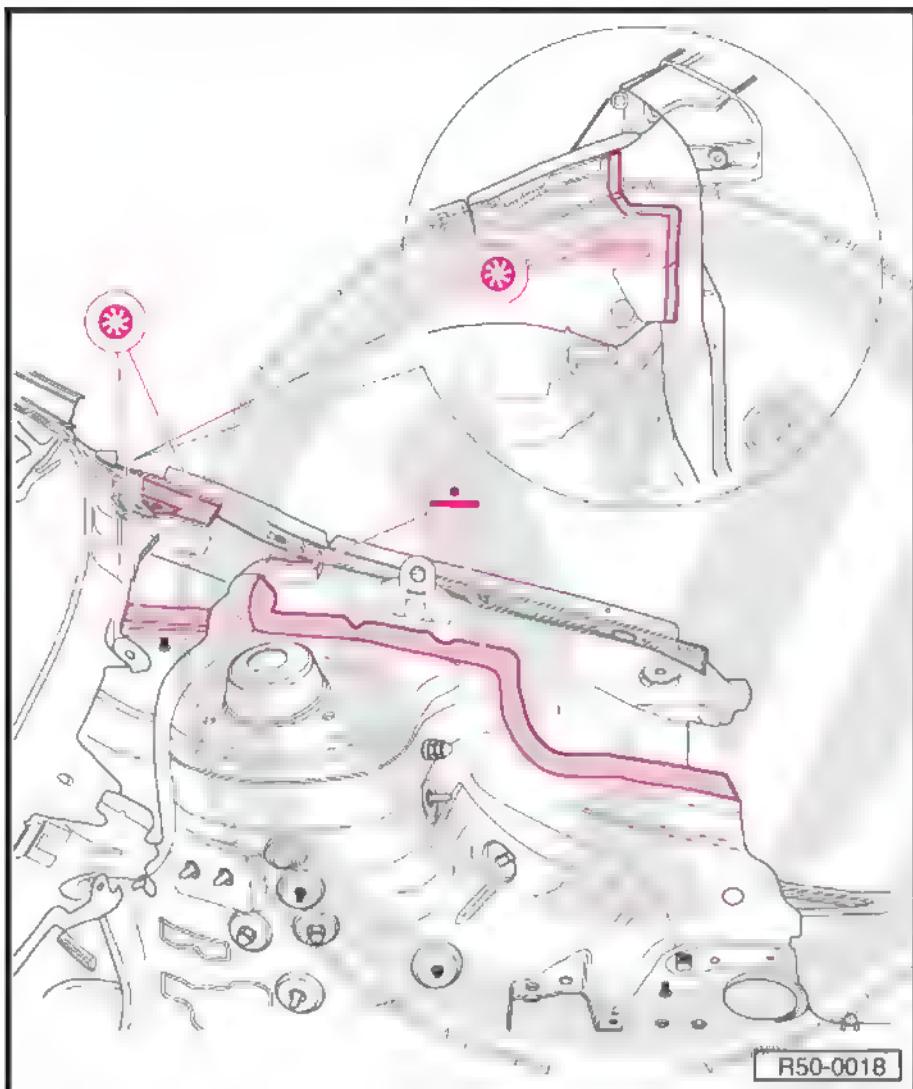
4.3.3 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust the new part with the vehicle supported by its wheels or under the alignment platform.
- Check the adjustment with other components.





- Weld wheel arch upper longitudinal member, RP - spot seam (one row) and SG - hole fulfilment seam.
- Weld upper longitudinal member reinforcement [page 87](#).



RO 50 72 55 00

5 Wheel arch upper longitudinal member reinforcement - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

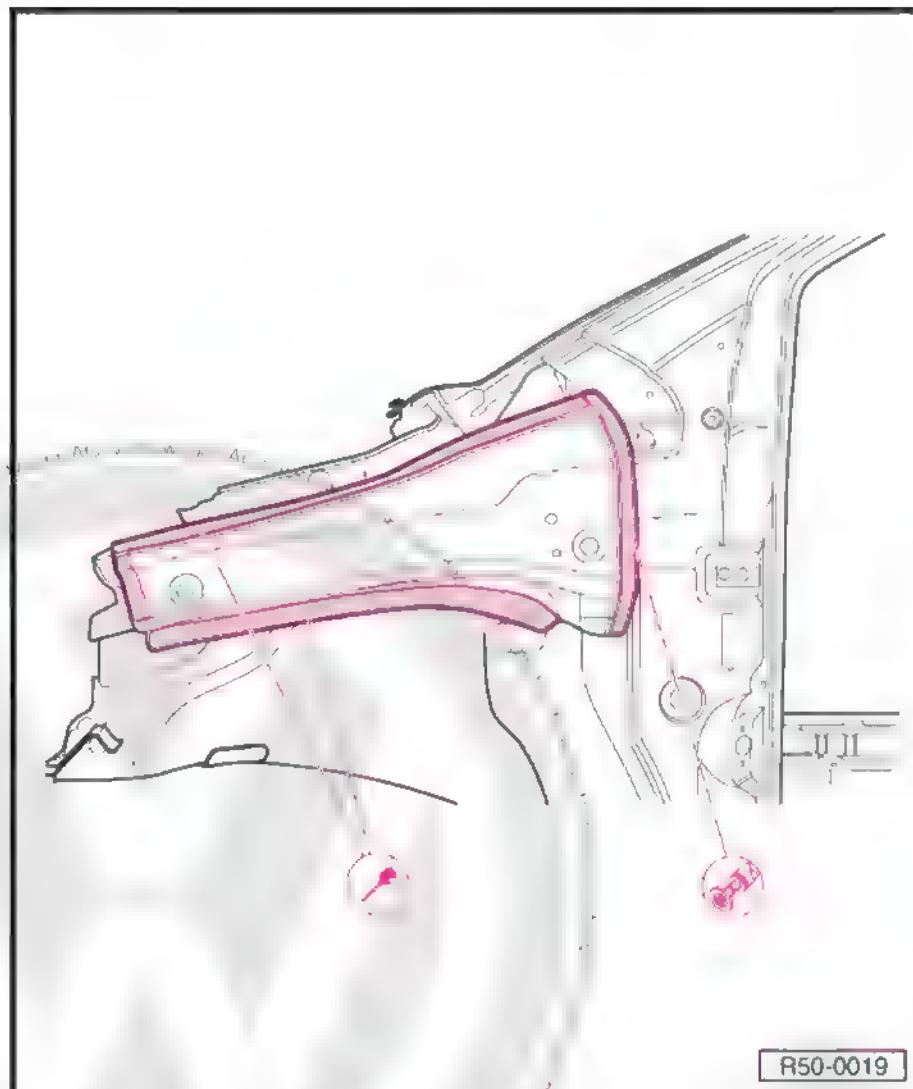
5.1 Tools



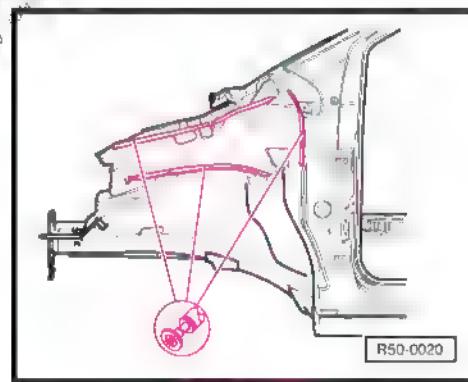
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

5.2 Remove



- Undo plate connections.
- Remove plate residues.





5.3 Install



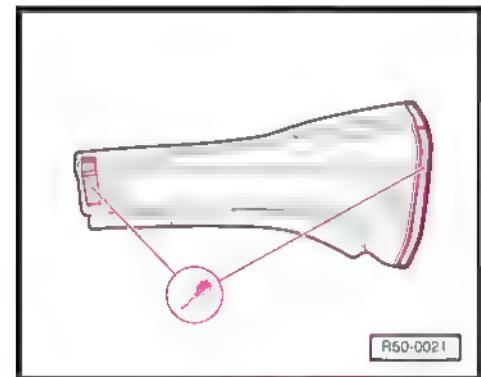
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 85](#)
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

5.3.1 Prepare the new part

Replacement part

- ◆ Wheel case longitudinal member upper part
- ◆ Wheel arch upper longitudinal member reinforcement
- ◆ Moulded foam part
 - Make 8-mm holes in the indicated area.



5.3.2 Moulded foam parts

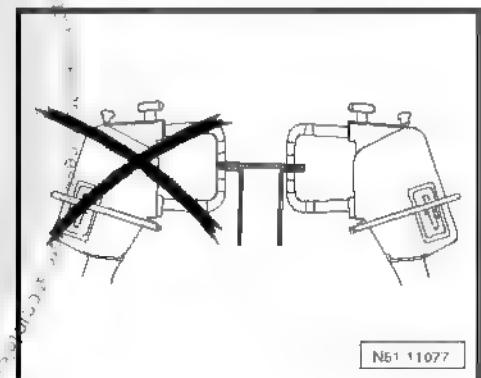
Follow the repair instructions .

5.3.3 Welding



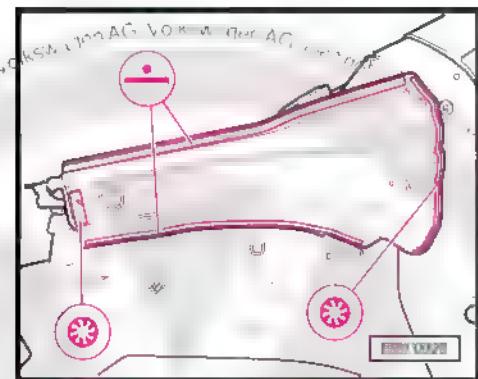
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust the new part with the vehicle supported by its wheels or on the alignment platform.
- Check adjustment with the complementary parts.





- Weld upper longitudinal member reinforcement, RP - spot seam (one row).
- Weld upper longitudinal member reinforcement with A-pillar SG - hole fulfilment seam





RO 50 74 55 50

6 Front wheel arch - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

6.1 Tools

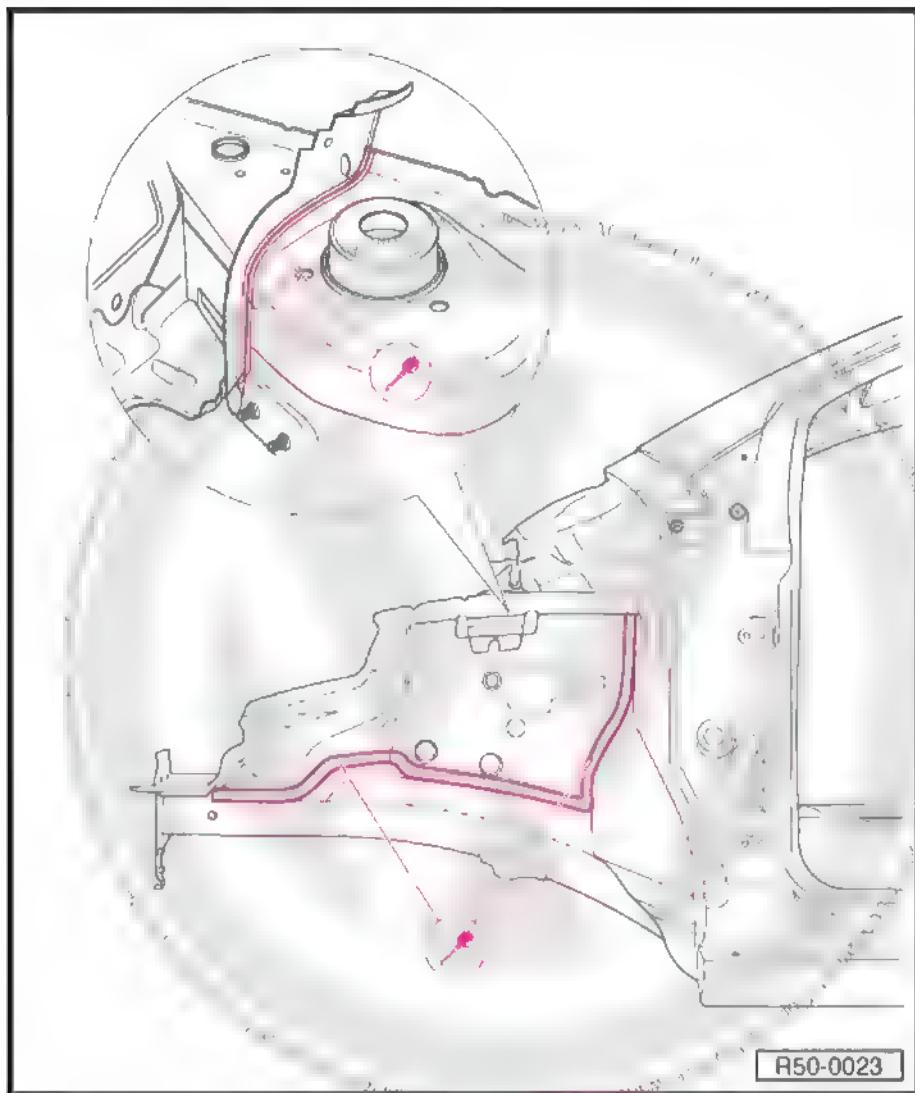


Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.*

6.2 Remove

- Removed wheel arch upper longitudinal member



- Undo plate connections.
- Drill water deflector panel.
- Remove plate residues.

6.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 89](#)
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

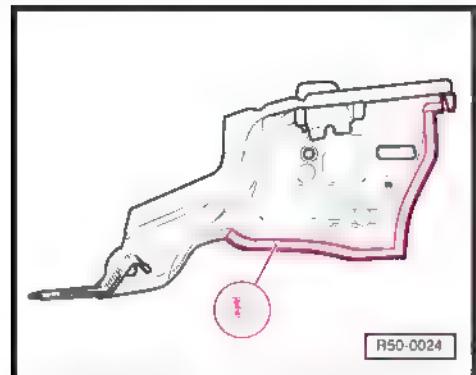
6.3.1 Prepare the new part

Replacement part

- ◆ Front wheel arch



- Drill the new part.

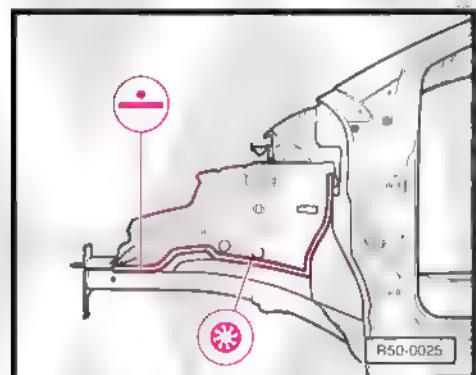
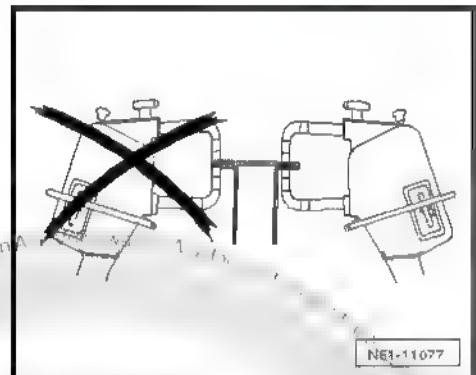


6.3.2 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*
- Adjust the new part with the vehicle supported by its wheels or on the alignment platform.
- Check the adjustment with other components.
- Weld wheel arch in the lower longitudinal member, RP - spot seam (one row).
- Re-establish other connections, SG - hole fulfilment seam.



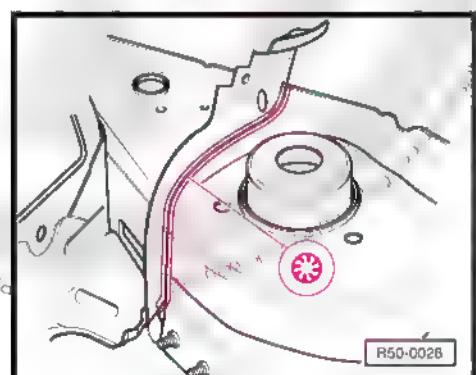
- Weld the core plate for the water reservoir, SG - hole fulfilment seam.



Note

Pos. -17- of the alignment platform - VAS 5224- can be used for checking the dimension -a-.

- Weld the wing connecting plate [page 83](#).
- Weld the longitudinal member to the upper wheel arch section [page 87](#).





RO 50 75 55 52

7 Front wheel arch (partial part) - replace



DANGER!

Follow the safety instructions!

Safety instructions ⇒ General Information; Body Repairs, General Body Repairs ; Safety Instructions

7.1 Tools

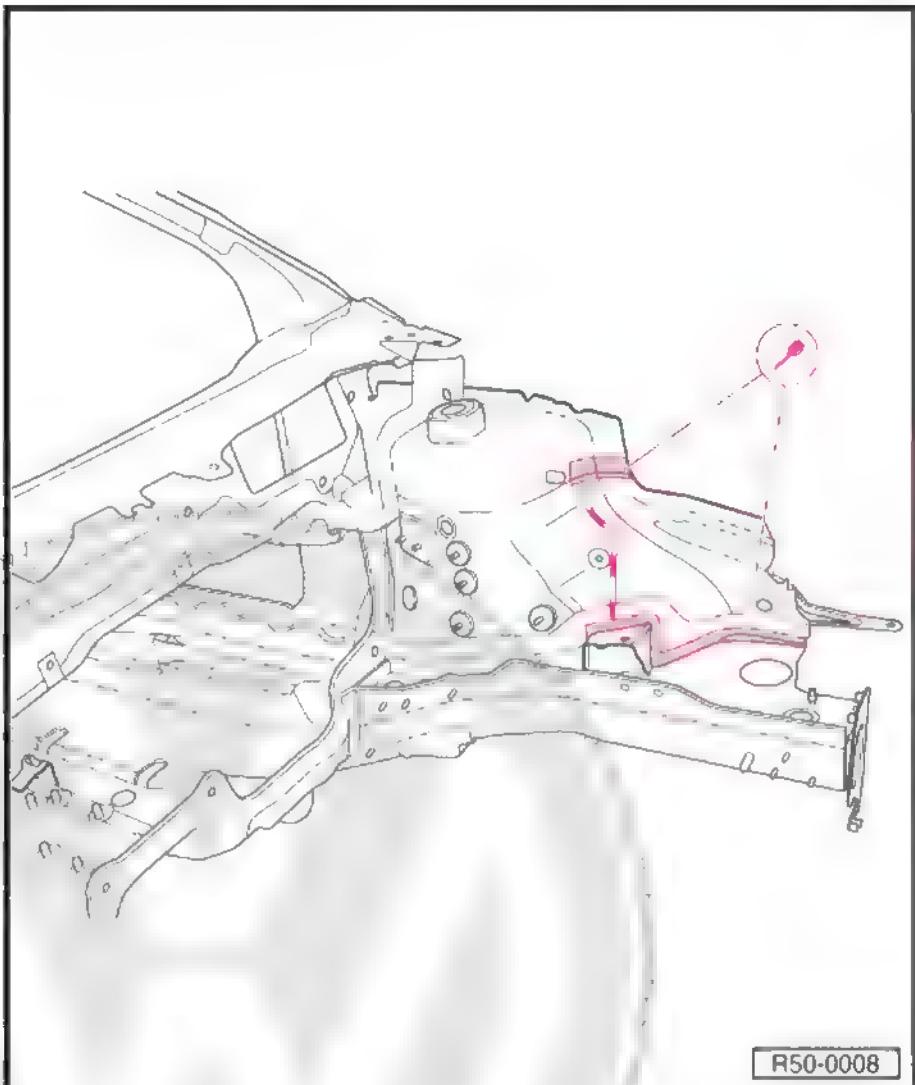


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

7.2 Remove

- Wheel arch upper longitudinal member removed.
- Upper longitudinal member reinforcement removed



- Cut wheel arch from suspension housing reinforcement.
- Undo plate connections.
- Remove plate residues.

7.3 Install



Note

Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [→ page 92](#)

At smoothed areas, apply zinc-based conductive paint \Rightarrow General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

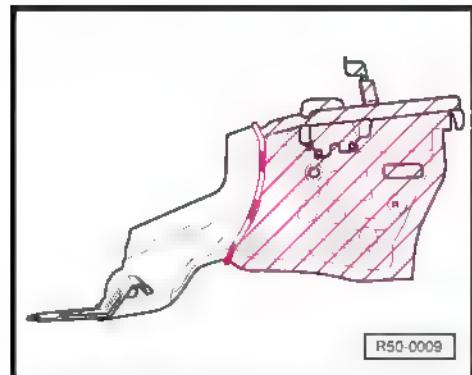
7.3.1 Prepare the new part

Replacement part

- ◆ Wheel case



- Transfer wheel arch cut to the new part, leave 10 mm to perform overlapping, eliminating the shadowed area from the new part.

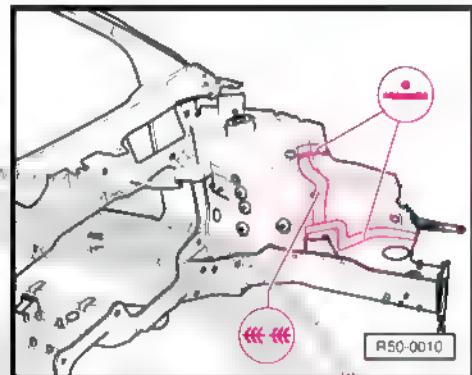
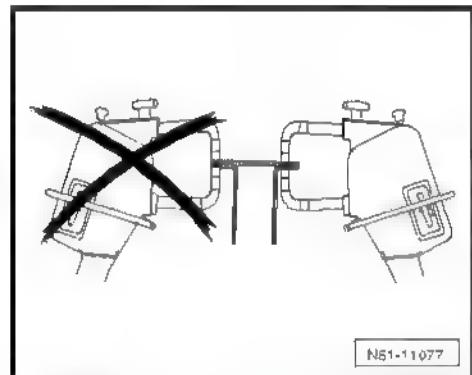


7.3.2 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*
- Adjust the new part with the vehicle supported by its wheels or on the alignment platform.
- Check the adjustment with other parts.
- Weld wheel arch, RP - spot seam (one row).
- Overlap weld on both sides of the lower separation cut, SG - seam (discontinuous).





RO 50 79 49 50

8 Auxiliary frame support thread - repair



DANGER!

Follow the safety instructions!

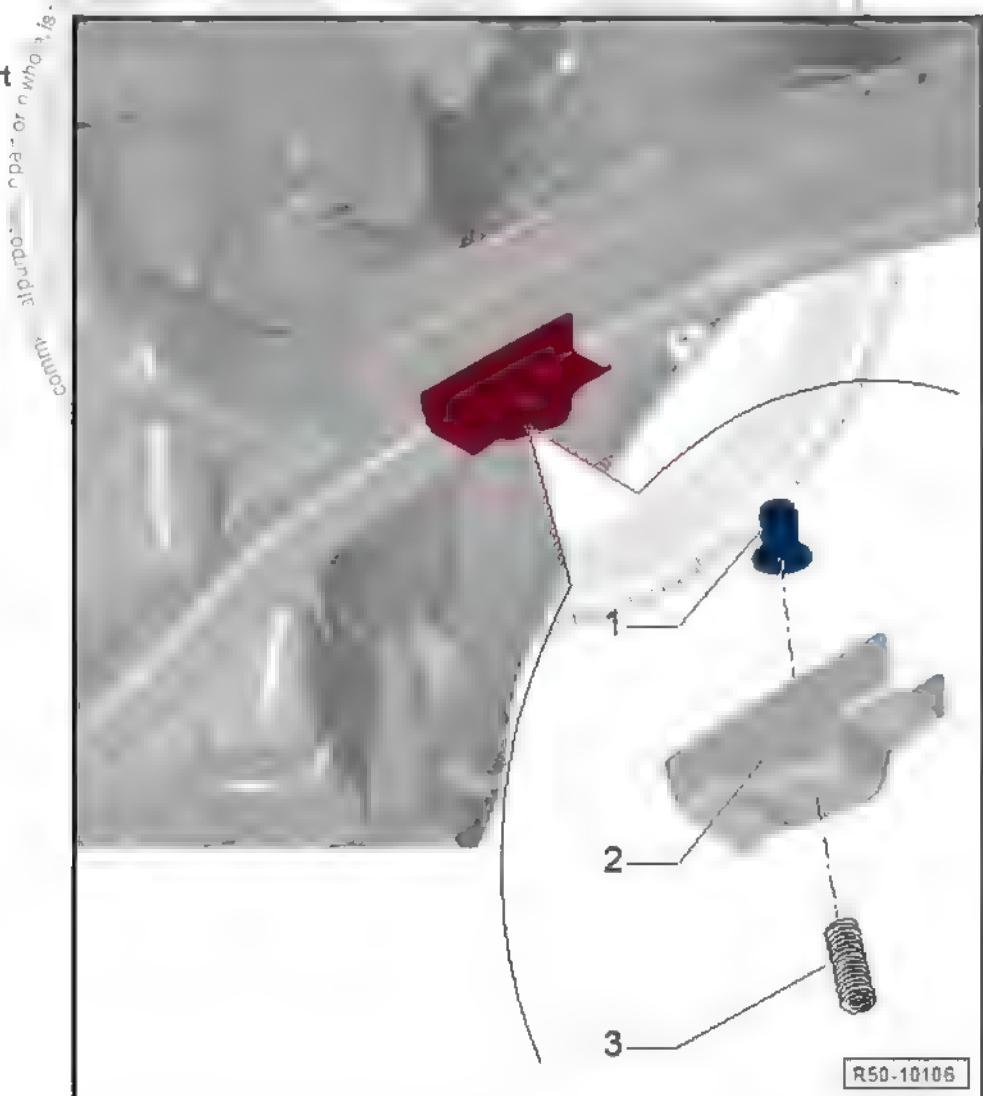
⇒ General Information; Body Repairs, General Body Repairs ;
Safety Instructions



Note

The repair of the thread is shown in this vehicle taking as an example the left front support/ if necessary, the same procedure can be repeated in the other 3 supports.

- 1 - Weld nut
- 2 - Auxiliary frame support
- 3 - Heli-coil thread insert





Note

- ◆ The plate with thread is not a replacement part and can be repaired only once in case of damage.
- ◆ In case of a new damage to the support thread, the support must be replaced. Replace the auxiliary frame support [→ page 78](#).

8.1 Tools

Special tools and workshop equipment required

- ◆ Heli-coil M12x1.5 thread set - VAS 6058-
- ◆ Drill - vas 6267-

8.1.1 Composition of the Heli-coil M12x1.5 thread set - VAS 6058-

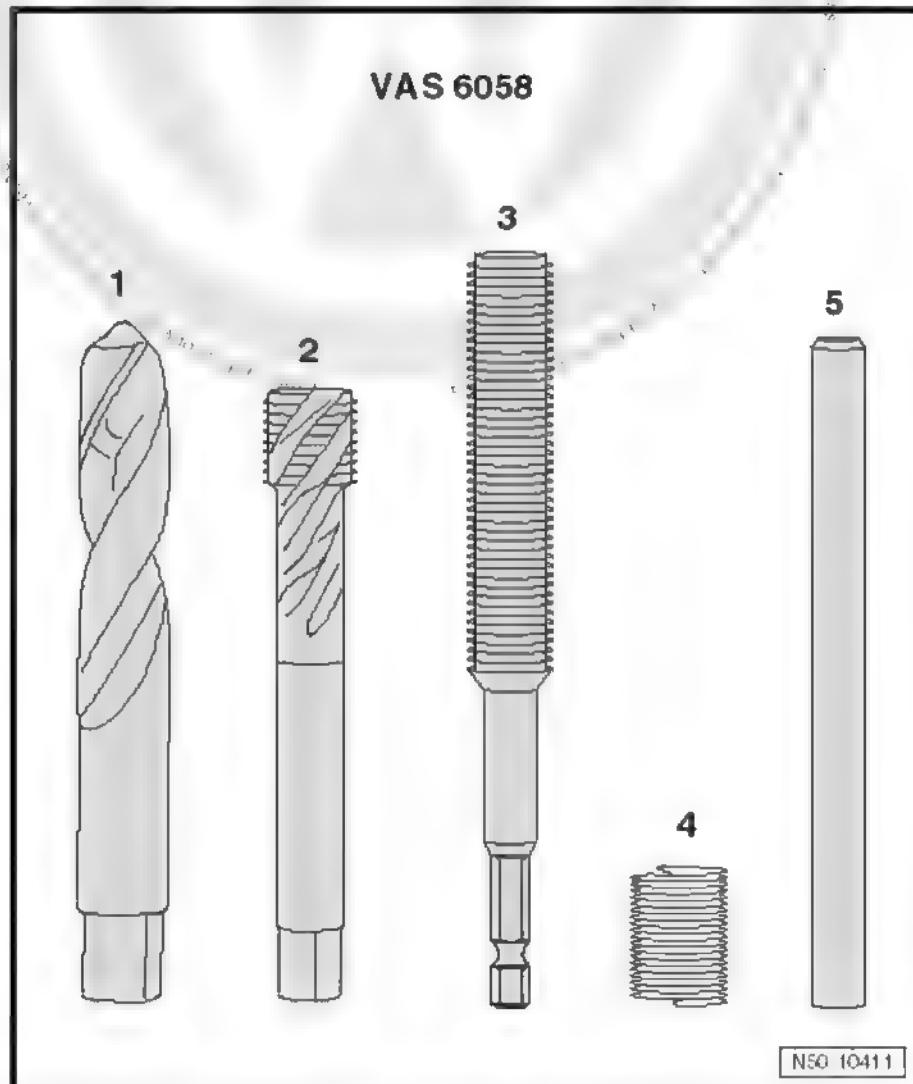
1 - Helical drill Ø 12,5 mm

2 - Male thread M 12 X 1,5 mm

3 - Assembly spindle

4 - Threaded insert M12 x 1,5 x 24 (VAS 6058/1)

5 - Breakage pin with magnetic tip

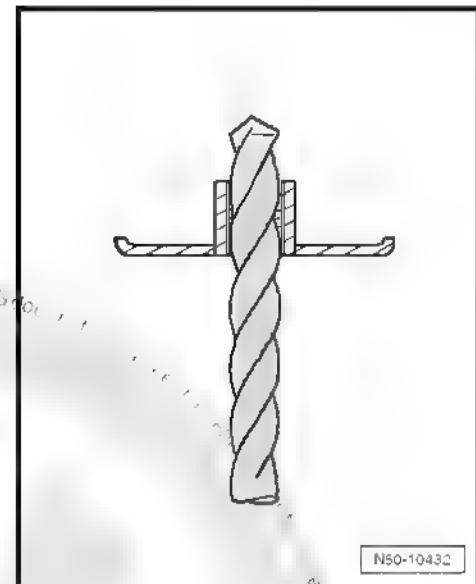




8.2 Thread repair

8.2.1 Perforating thread

- Perforate the thread with the drill



Note

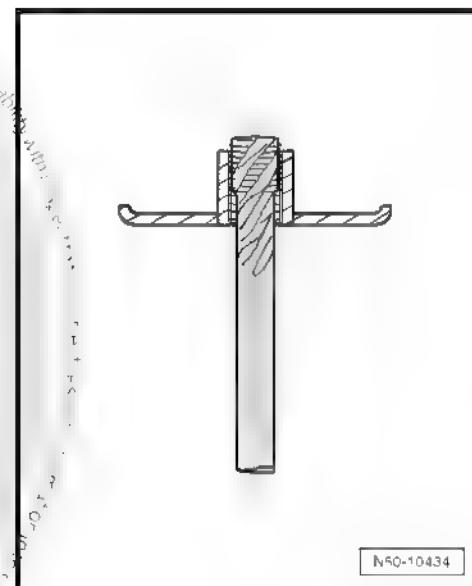
- ◆ For drilling and milling, use the drill - VAS 6267-.
- ◆ When drilling, the drill must be sustained with the additional support of a second operator.
- ◆ Do not tilt the drill.





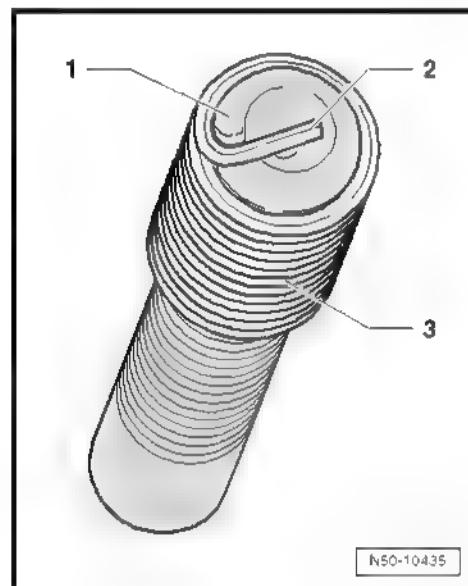
8.2.2 Cutting the thread

- Use the male thread M 12 X 1,5 mm to make a new thread to place the insert.
- Clean the new thread with compressed air



8.2.3 ~~your~~ Installing insert

- Place the thread insert -3- onto the assembly spindle until the lock -2- touches the spindle tip. -1-.





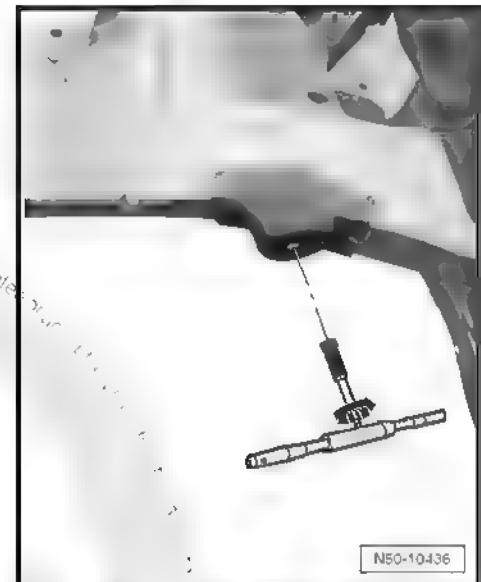
- Thread the insert onto the threaded plate until the threaded fit is at the same level of the threaded plate (visual checking)
- Then, thread the thread insert $1/4$ back to the inside



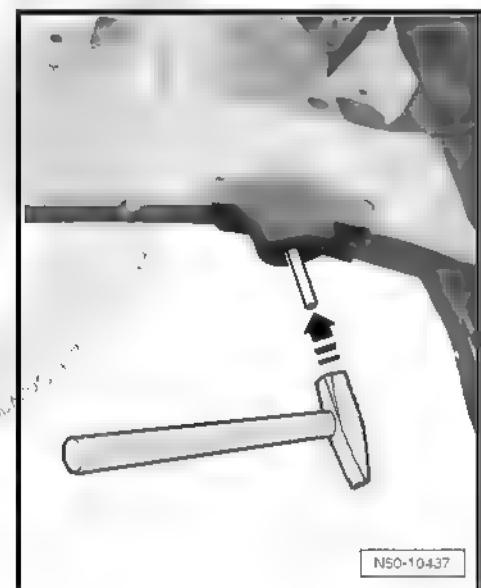
Note

The threaded fit must be easily turned.

- Remove the assembly spindle



- Break the thread insert lock with the breakage pin with magnetic tip.
- Install the auxiliary frame (assembly mounting) ⇒ Chassis, axles, steering; Rep. gr. 40 ; Auxiliary frame (assembly mounting) - remove and install .





RO 50 79 55 50

9 Front longitudinal member - replace



DANGER!

Follow the safety instructions!

Safety instructions => General Information; Body Repairs, General Body Repairs ; Safety instructions

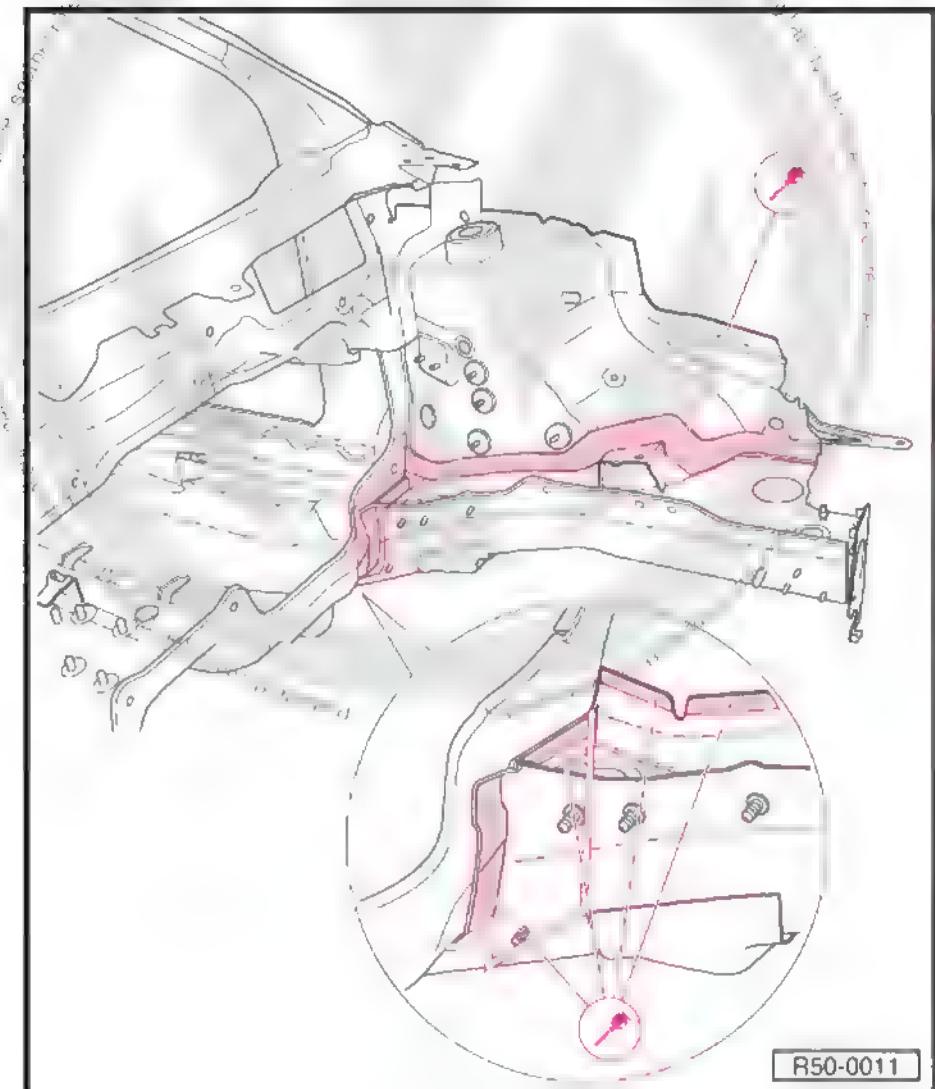
9.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal => Tech. Support, Sist. and Info of Services. Tools and Equip., Manual for the Brazilian market or in the portal => Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

9.2 Remove



- Cut the longitudinal member.
- Undo plate connections.
- Remove plate residues.

9.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 100](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information, Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

9.3.1 Prepare the new part

Replacement part

- ◆ Front longitudinal member

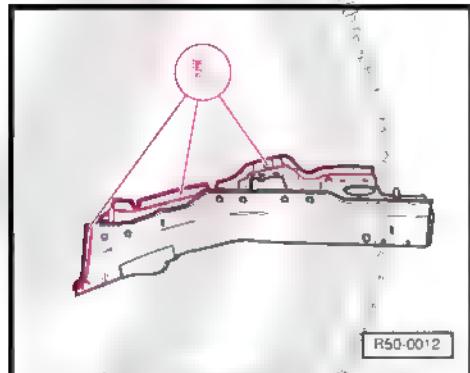


- ◆ Front bumper support
- Transfer wheel arch cut for the new part.
- Drill the new part with holes for SG seam, Ø 7 mm.



Note

- ◆ Observe support reinforcement (guide channel for fuel tubing) on the right side longitudinal member
- ◆ Depending on the damage, place the cut in front or behind the reinforcement.

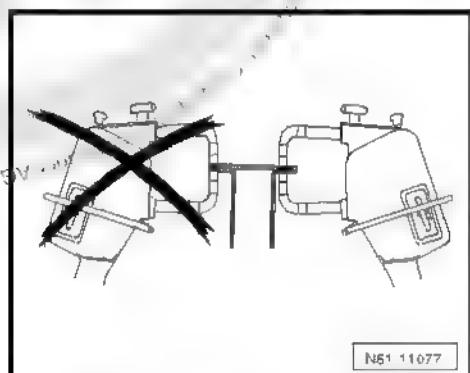


9.3.2 Welding

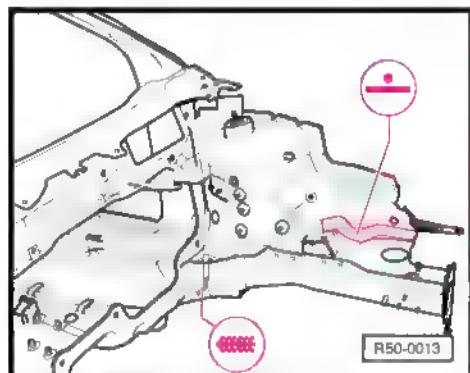


Note

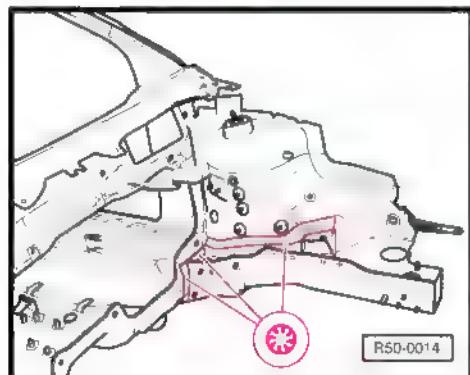
- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust and stick the new part with the vehicle supported on its wheels or on the alignment platform.



- Weld cut, SG - continuous seam.
- Point other connections, RP - spot seam (one row).



- Weld longitudinal member, SG - continuous seam.
- Weld longitudinal member, SG - hole fulfilment seam.
- Weld front bumper support ➔ page 109 .





RO 50 79 55 52

10 Front longitudinal member (partial part) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs
Safety instructions

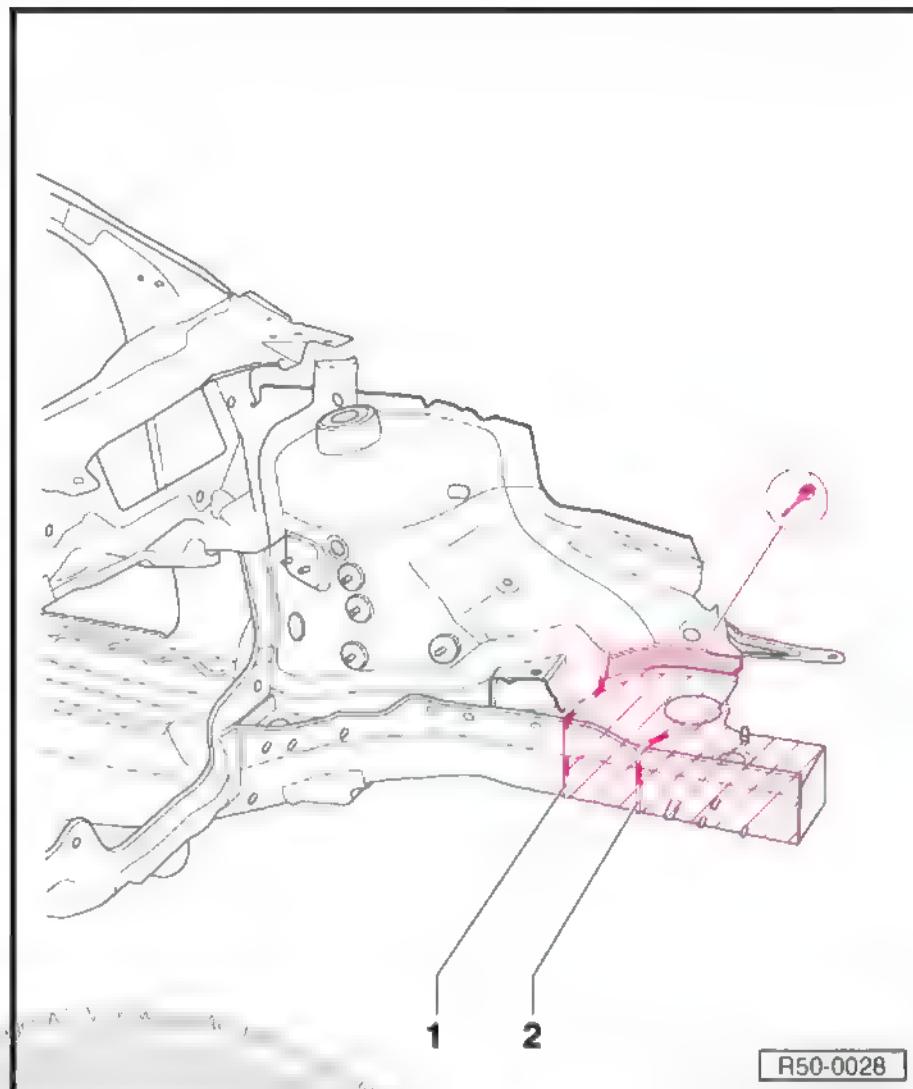
10.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

10.2 Remove



- Undo plate connections.



Note

- ◆ Depending on damage, determine the cut, such as cut -1- or -2-.
- ◆ Cut in a straight line.
- Remove plate residues.

10.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
→ page 103
- ◆ At smoothed areas, apply zinc-based conductive paint → General Information, Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding



10.3.1 Prepare the new part

Replacement part

- ◆ Longitudinal member
- ◆ Cover plate
- ◆ Front bumper support
- Transfer longitudinal member cut for the new part and cut

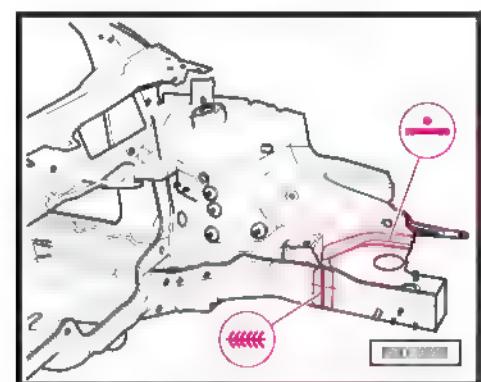
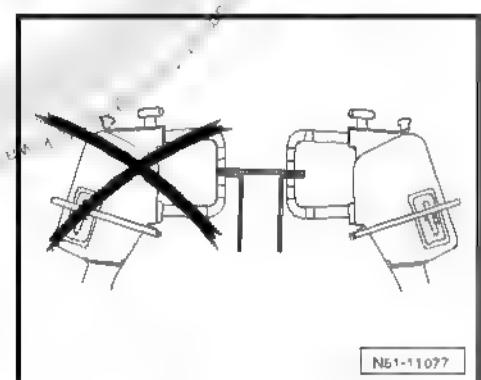


10.3.2 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust the new part with the vehicle supported by its wheels or on the alignment platform.
- Butt weld the connection, SG - continuous seam.



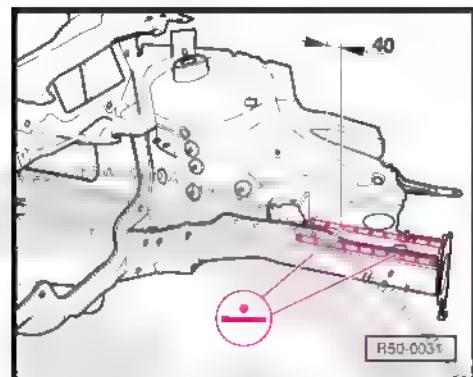


- Weld plate with wheel arch, RP - spot seam (one row).
- Weld front bumper support [page 109](#) .



Note

If longitudinal member and cover plate are cut as one piece, then longitudinal member cuts and the cover plate must be placed 50 mm apart and the welding spots must be parallel. The indicated distance of -40 mm- must be observed.





RO 50 80 55 00

11 Front bumper support - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

11.1 Tools



Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.*

11.2 Remove

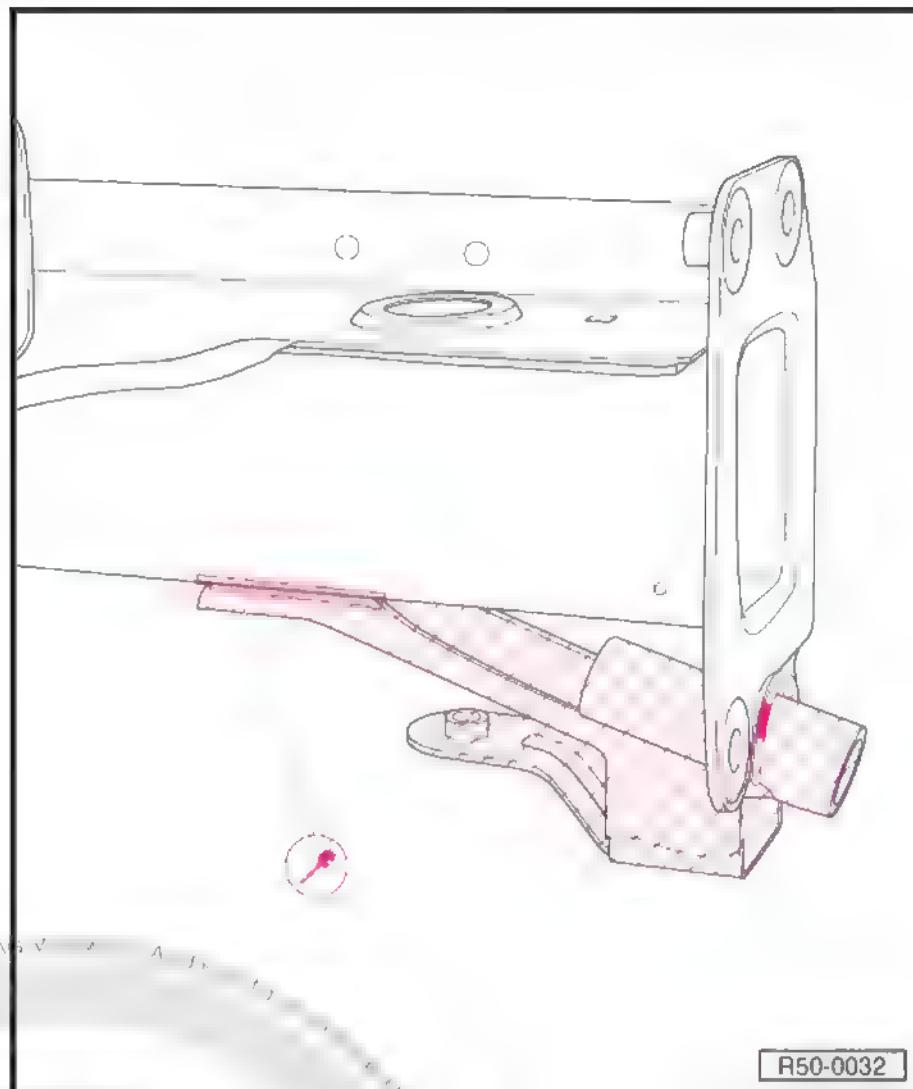
- Headlight housing (Fox and Spacefox), removed.



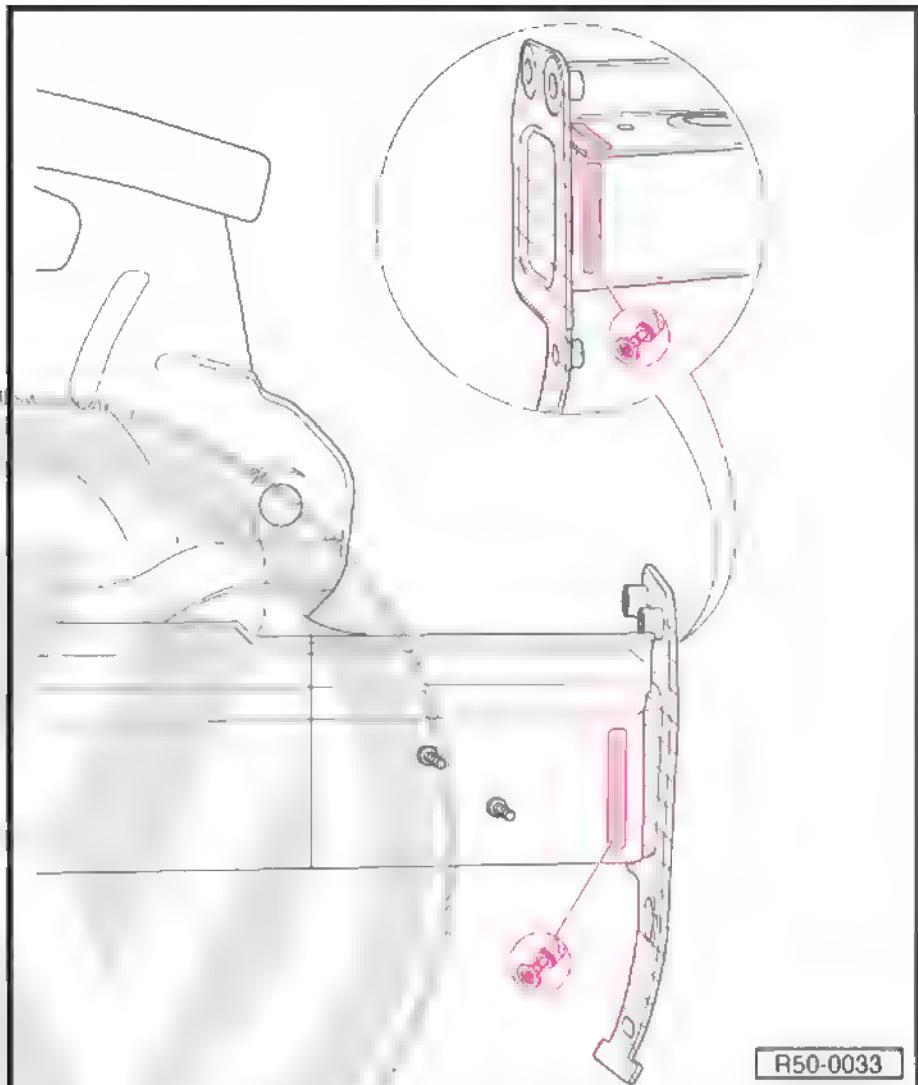
Note

To replace right front bumper support, first remove tow hook support.





- Undo plate connections.



- Grind the weld beads.
- Remove plate residues.

11.3 Install



Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [⇒ page 107](#).

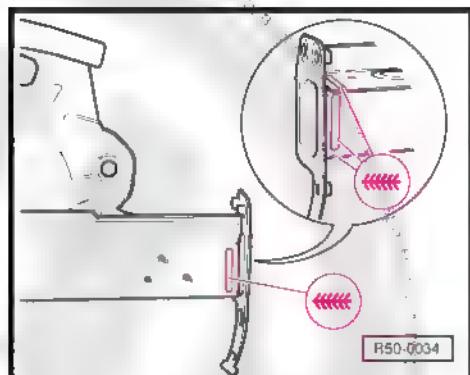
11.3.1 Welding

Replacement part

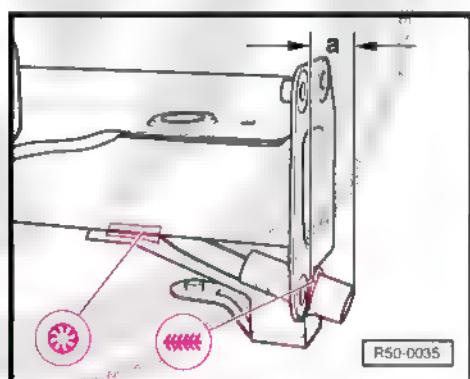
- ◆ front bumper support
- ◆ Tow hook support (only on the right side)
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.



- Weld front bumper support, SG - continuous seam.
only the right side of the vehicle



- Weld tow hook support, SG - hole fulfilment seam and SG - continuous seam.
Dimension -a- = 30 mm (Fox and Spacefox)
Dimension -a- = 75 mm (New Fox and New Spacefox)





51 – Body - centre

RO 51 03 55 00

1 Roof (with and without sunroof - replace)



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

1.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

1.2 Remove



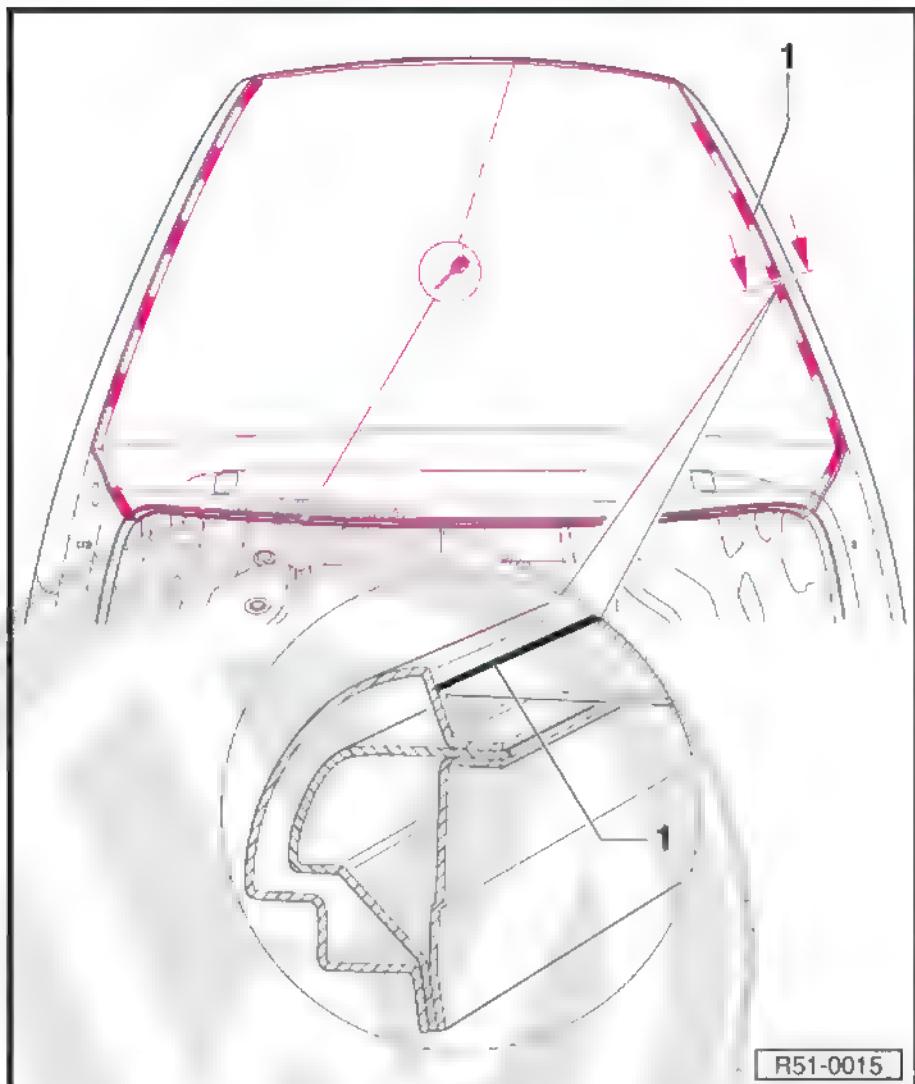
Note

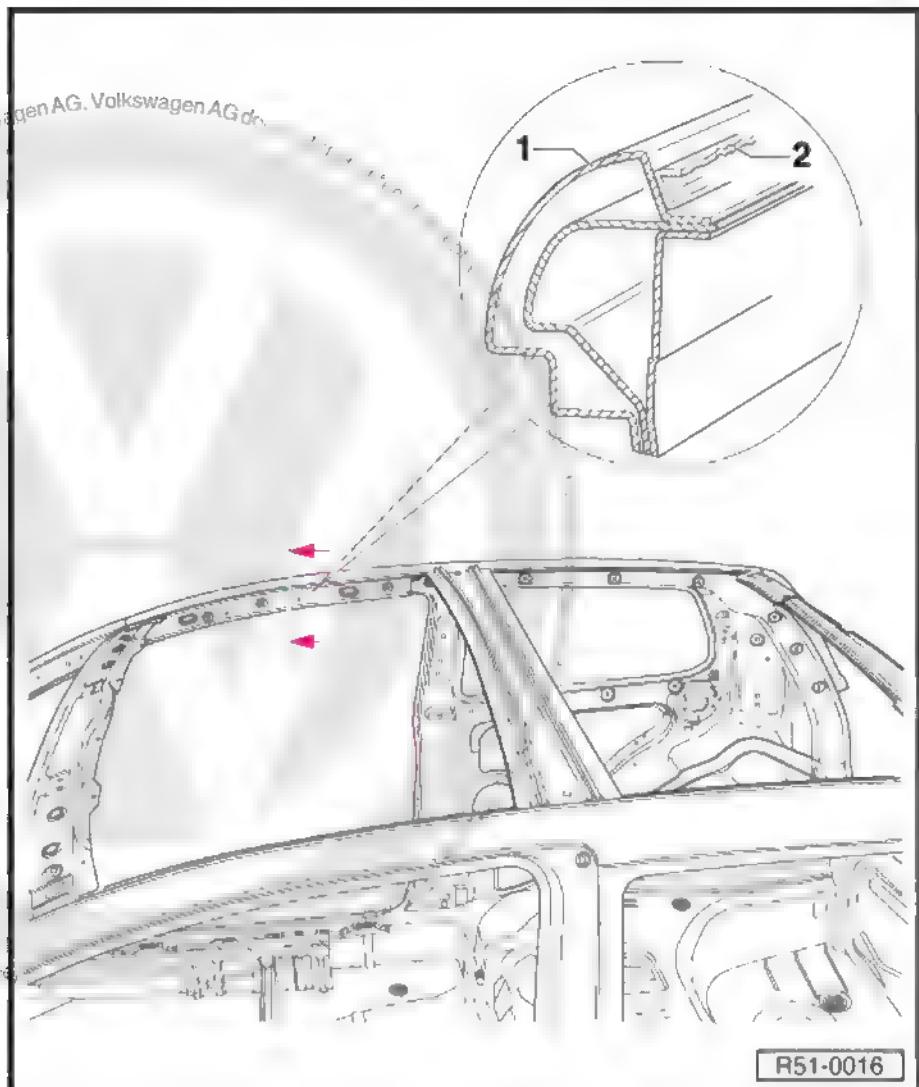
The procedure for roof replacing is the same for vehicles with and without sunroof.



1 - Continuous laser bead

- Loosely separate the central part of roof





- Remove plate residues.



Note

- ◆ When plate residues are removed -2- from the central roof part, you must make sure that the side connections -1- (side panels and frames) are not damaged.
- ◆ Do not use cutting or grinding discs.

- Remove all residues of glue and sealing compound from the roof cross member, front and rear sections, and in the roof reinforcement.
- Repair the painting damages on the front and rear roof cross member sections and the roof reinforcement

1.3 Install



Note

Use of different types and thickness of steel demands appropriate spot welding equipment.



1.3.1 Prepare the new part

Replacement part

- ◆ Central roof section
- ◆ 1K Assembly adhesive - D 190 MKD A3- (1 cartridge 310 ml)
- ◆ 2K Assembly adhesive - D 004 660 M2- (2 cartridges 200 ml)
- ◆ 2K Body adhesive - D 180 003 M2- (2 cartridges 120 ml)
- ◆ Cavity wax - AKR 321 M15 4- or -D 330 KD2 A1-
- ◆ Polyurethane adhesive - AKD 476 KD5 05- (1 cartridge 310 ml)
- ◆ Felts - 533 867 910 B- 15 X 1,5 X 880 mm



Note

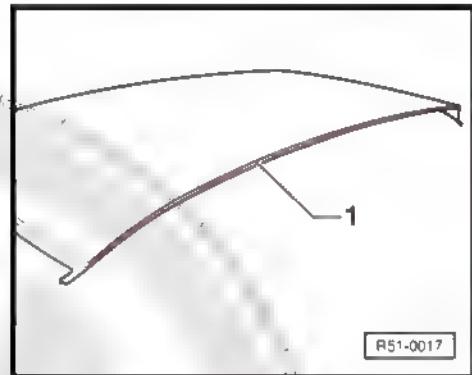
- ◆ To ensure a durable and problem-free roof repair, please follow the work sequence below.
- ◆ The gluing areas must not be filled before the roof central part is glued.

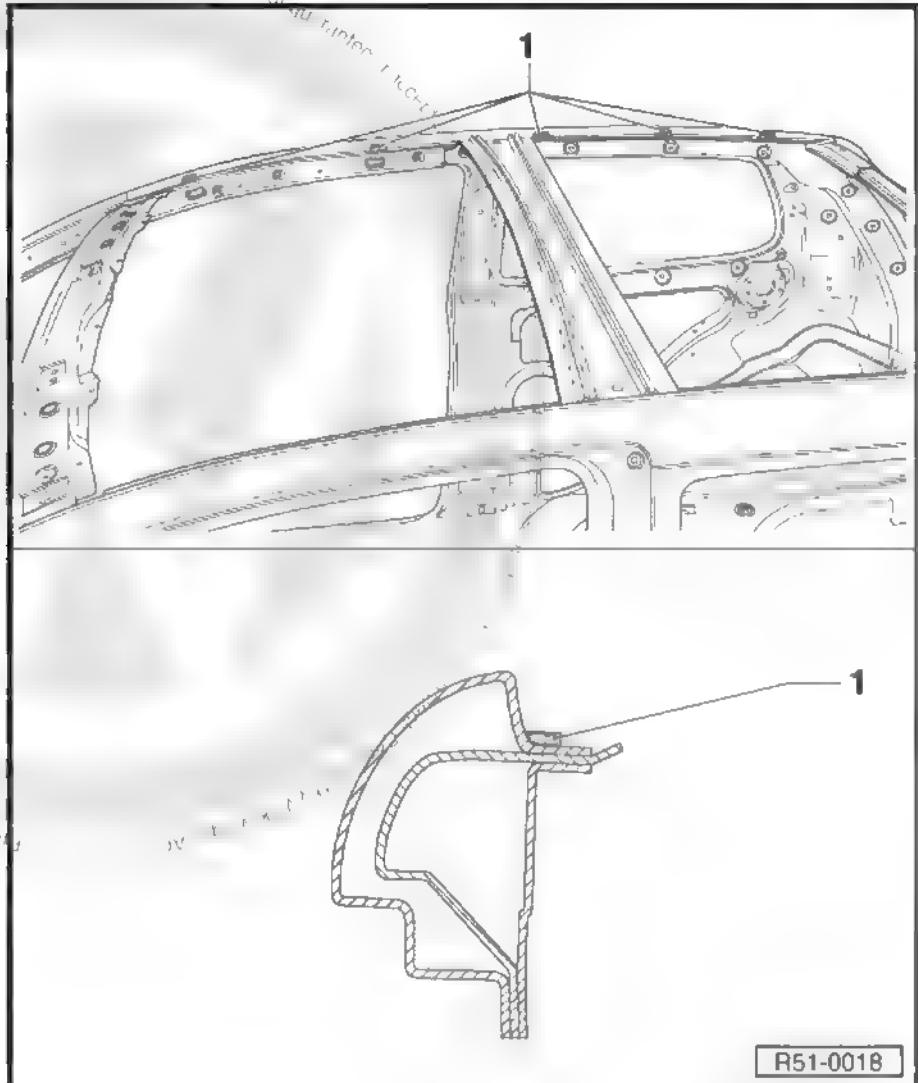
- Use fine sandpaper (grit 360) to leave the gluing area rough.
- Sand the gluing area of the roof internal and external parts -1- left and right side with a sandpaper (grit 800), do not remove primer coat.



Note

Thus, the proper gluing of the 2K body adhesive with pasting area is ensured.





R51-0018

- Place approximately 10 felt parts -1- over the left and right roof frame.
- Place the central roof section over the roof frame and check the roof alignment in relation to the side panels and side frames (visual control).



Note

Verify the adjustment of the central roof section with the rear lid and the windscreen.

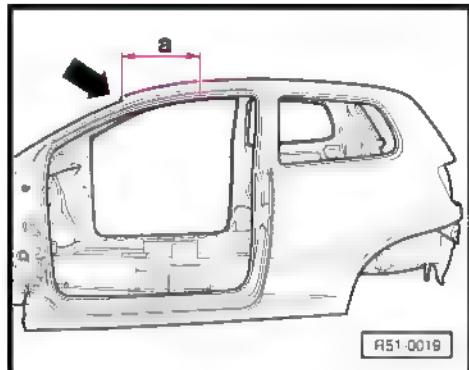


Tension three tensioning straps (commercially available) on the roof as follows:

1. front strap

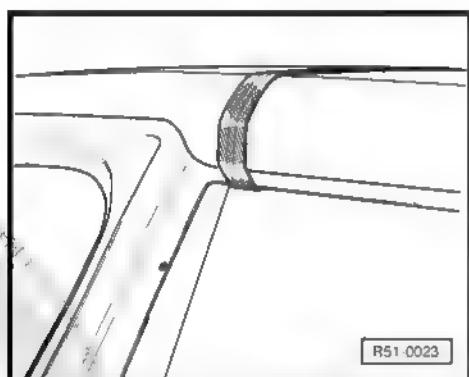
- Measure on both sides of the vehicle, starting on the front roof corner -arrow- (windscreen gap) -at- = 350 mm backwards and mark these points in the vehicle
- Tension the front strap at these markings.

2. central strap

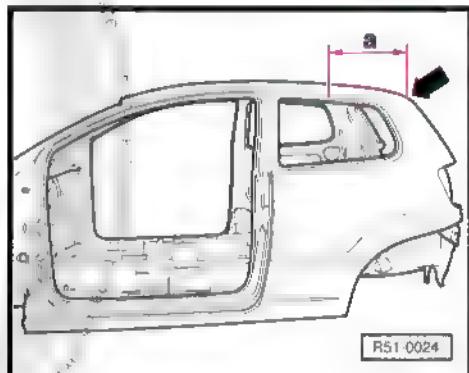


- Align the central strap after the rear corner of the vehicle B-pillar.

3. rear strap



- Measure on both sides of the vehicle starting on the rear roof corner -arrow- (rear lid cut) -a- = 350 mm forward and mark these points in the vehicle.
- Tension the rear strap at these markings.

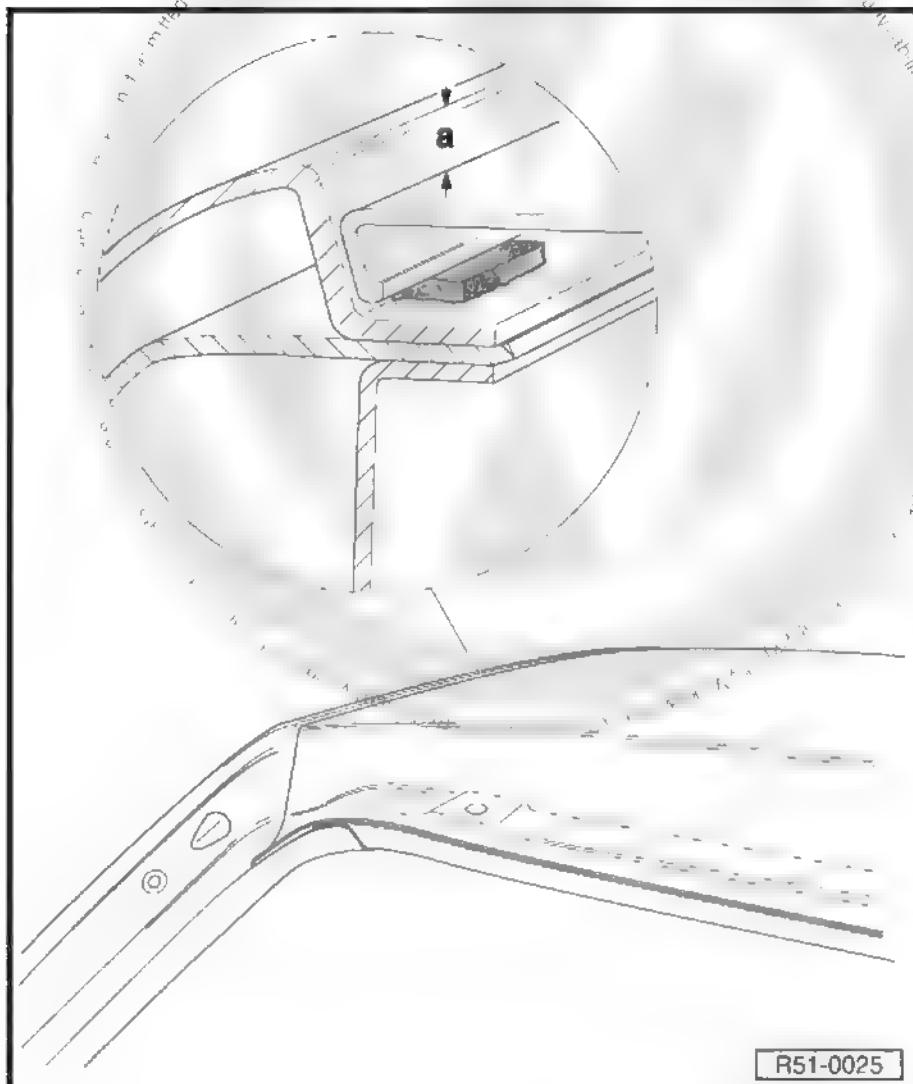


1.3.2 Adjust the depth measurement for the central roof section

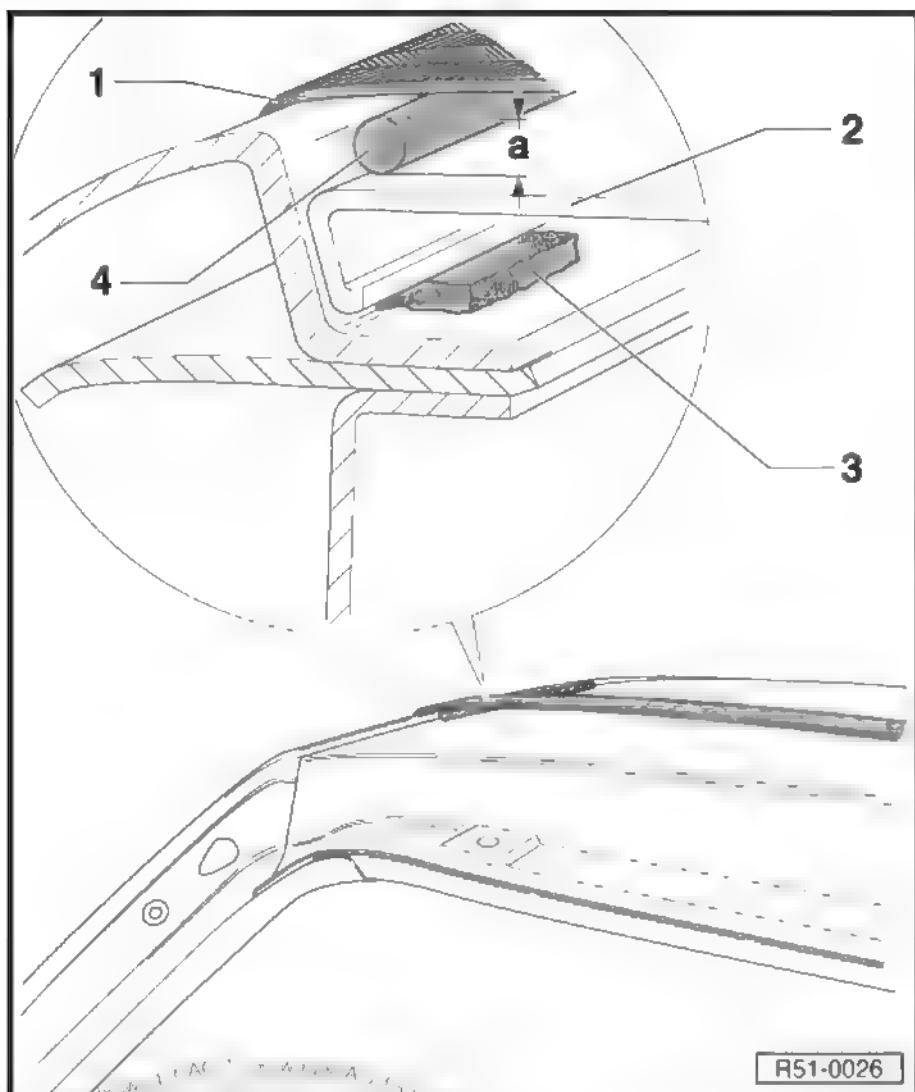
The dimension can be adjusted so that the central roof section is lower in relation to the side frame, by tensioning and loosening the tensioning straps.



To avoid damage to the central roof section or to the side frame, the tensioning straps cannot be overstretched.



Dimension -a- = 3.0+1 mm



- Use a drill (\varnothing 3.0 mm) to verify the dimension -a- (the drill -4- must move easily between the central roof section -2- and the tensioning strap -1-).
note: If necessary, you must change the felt pieces -3- for even alignment of the roof.
- If necessary, you must change the felt pieces -3- for even alignment of the roof.
- Remove the central roof section again and clean the gluing areas on the central roof section and on the vehicle with silicone remover - LSE 020 100 A3- .

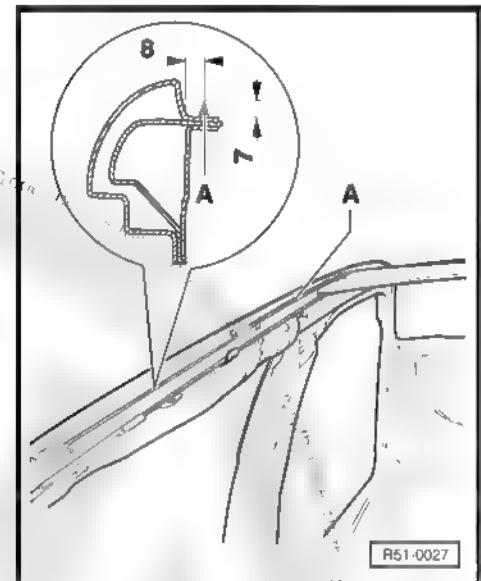


1.3.3 Glue the central roof section

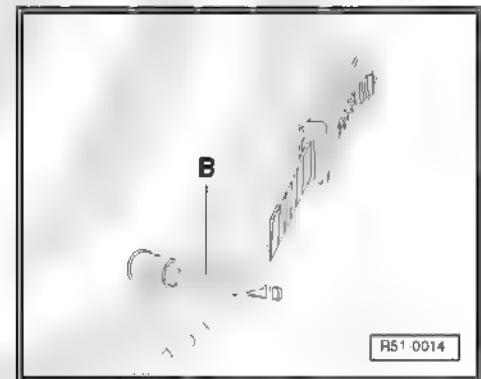


Note

- ◆ The gluing materials must be applied quickly.
- ◆ 2K body adhesive - D 180 003 M2- curing time is of approx. 20 min
- ◆ To apply the gluing materials, you must use compressed air or electric cartridge guns.
- ◆ To apply the adhesive, use the Compressed air gun - V.A.G 1761/1- and Double cartridge gun - VAS 5237- .
- ◆ To heat the adhesive, use the Cartridge heater - V.A.G 1939 A-
- First, apply to the area -A- of the roof frame the 1K assembly adhesive - D 190 MKD A3- with the compressed air gun - V.A.G 1761/1- .



- For this, you must cut 2 mm of -B- assembly adhesive -D 190 MKD A3- nozzle to obtain the shape corresponding to the bead.
- Then, apply to the area -C-with the 2K body adhesive - D 180 003 M2- using a double cartridge gun - VAS 5237- .



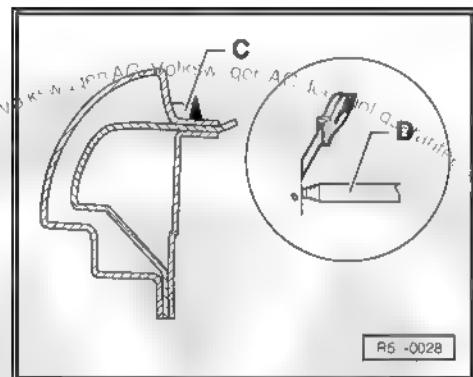


- To do so, you must cut the first stage of the static mixer -D-.

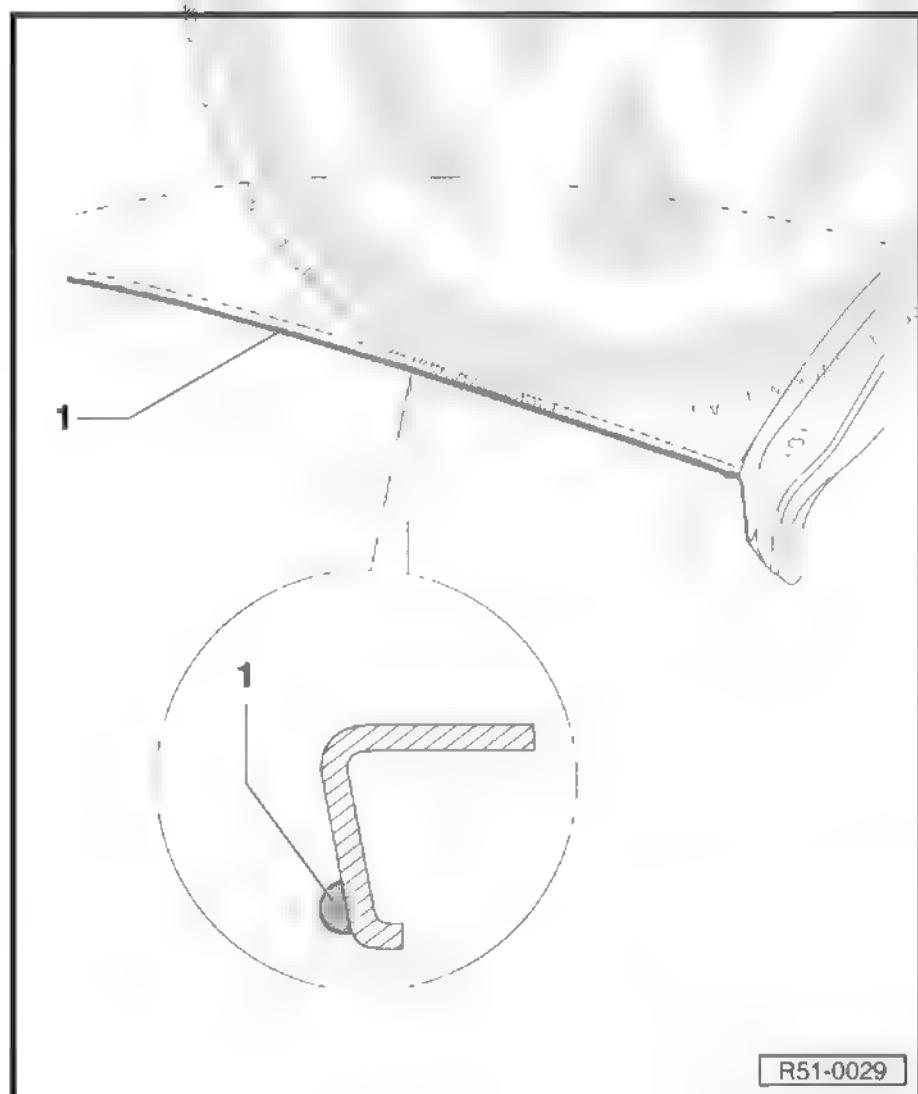


Note

- ◆ Follow minimum adhesive curing time.
- ◆ Carefully press the gun without the static mixer until adhesive comes out evenly from the two cartridge connection chambers
- ◆ Then, thread static mixer to the cartridge connection
- ◆ Apply the first 100 mm of adhesive onto a piece of cardboard and only then start applying on the vehicle.
- ◆ For the following steps, the help of a second person is necessary.



R6-0028



R51-0029

- Apply the 2K body adhesive - D 180 003 M2- -1- onto the central roof section flange with beads of approx 2 mm Ø; immediately place the central roof section and then, align it



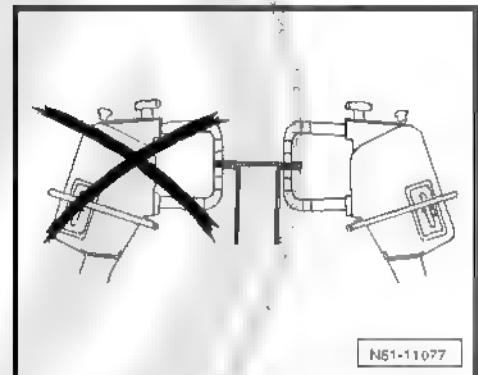
- Fasten the central roof section by the windscreen cut and on the rear lid cut with clips, and the central area with the tensioning straps.
- Immediately remove excessive adhesive in the roof corner with a cloth dampened with silicone remover - LSE 020 100 A3- .
- Verify the depth dimension for the central roof section
 → [page 116](#) .

1.3.4 Welding

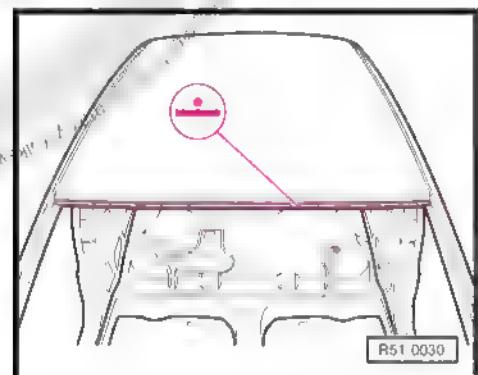


Note

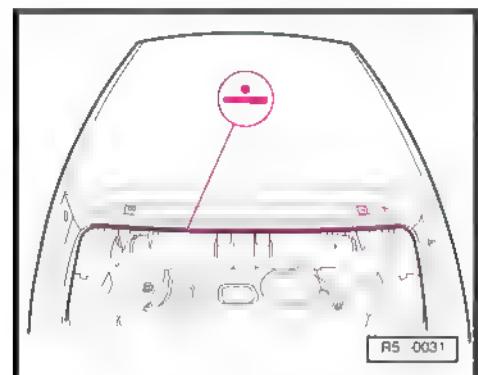
- Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- The rigidity of the set is determined by the weld disposition.
- ◆



- Weld central roof section in windscreen cut, RP - spot seam (one row).

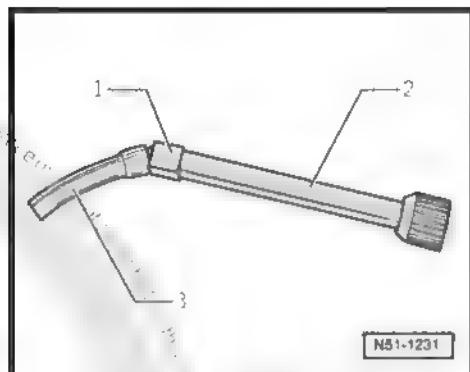


- Weld central roof section in rear door cut, RP - spot seam (one row).
- Press the 1K assembly adhesive - D 190 MKD A3- between the central roof section and the front roof cross member, the rear roof cross member and the roof reinforcement.
- Apply the primer, on the inside, to the right and left sides of the roof frame with the primer - ALN 002 003 04- .





- Extend tip -1- of the static mixer -2- of the 2K glass adhesive - D 004 660 M2- with a piece of commercially available plastic hose -3- approx. 80 mm long (internal diameter 12 mm).



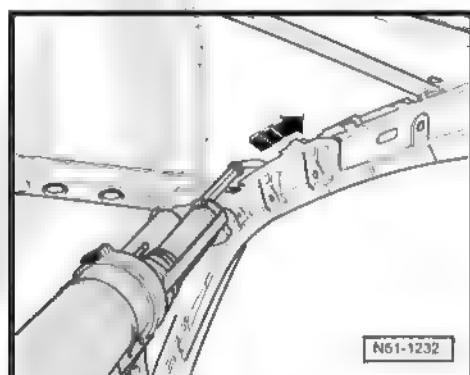
- Press the 2K glass adhesive - D 004 660 M2- on the left and right sides, between the central roof section and the roof frame.



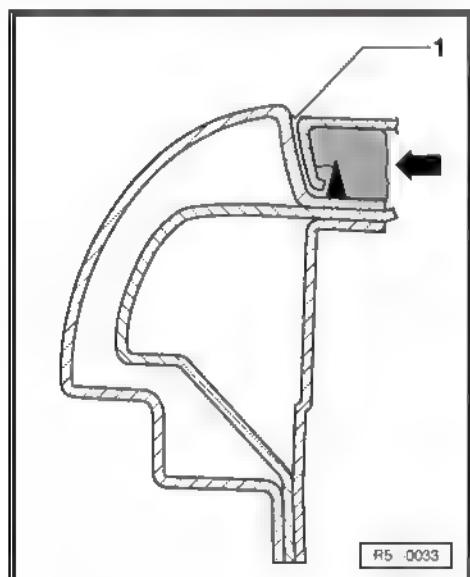
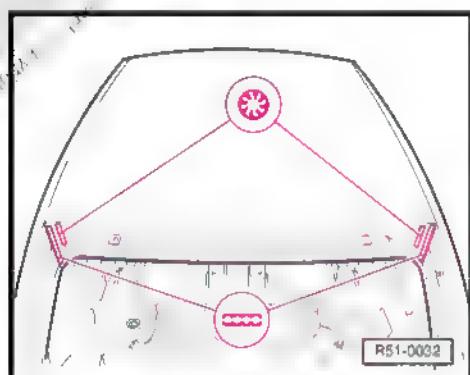
Note

- ◆ After gluing, vehicle shall remain immobilized from 8 to 10 hours at ambient temperature (min. 15° C) on a flat surface so that the glued components can dry.
- ◆ You can only work on the vehicle again after the drying time elapses.

- Weld the central roof section to the rear door cut, brazing - brass weld bead and SG - hole fulfilment seam.



- Make a slight sealing of the adhesive bead -1- with polyurethane adhesive - AKD 476 KD5 05- with the compressed air gun - V.A.G 1761/1- .
- After painting, apply anti-corrosion fluid (cavity wax) on roof gaps -arrow- with cavity wax - AKR 321 M15 4- or -D 330 KD2 A1- .





RO 51 03 55 10

2 Roof (Spacefox) - replace



DANGER

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

2.1 Tools



Note

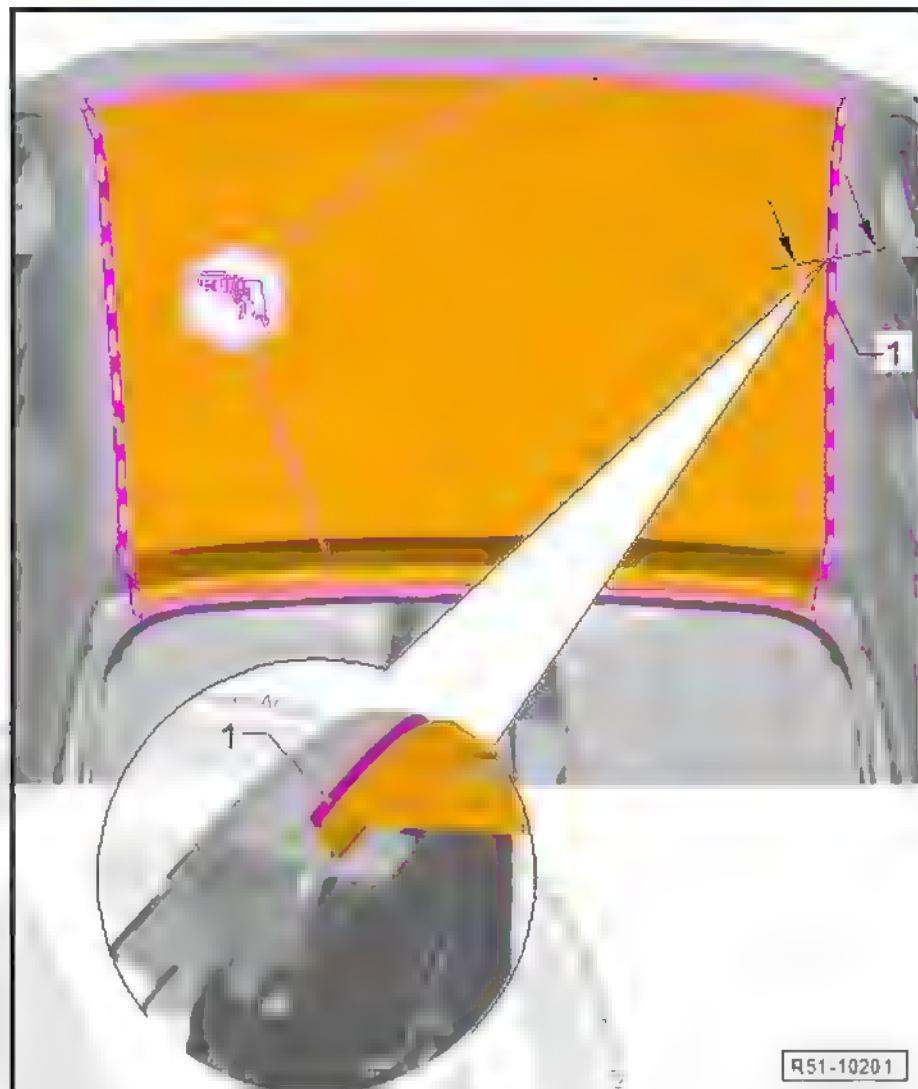
- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Infra. of Services. Tools and Equip.,
Manual for the Brazilian market or, in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.*

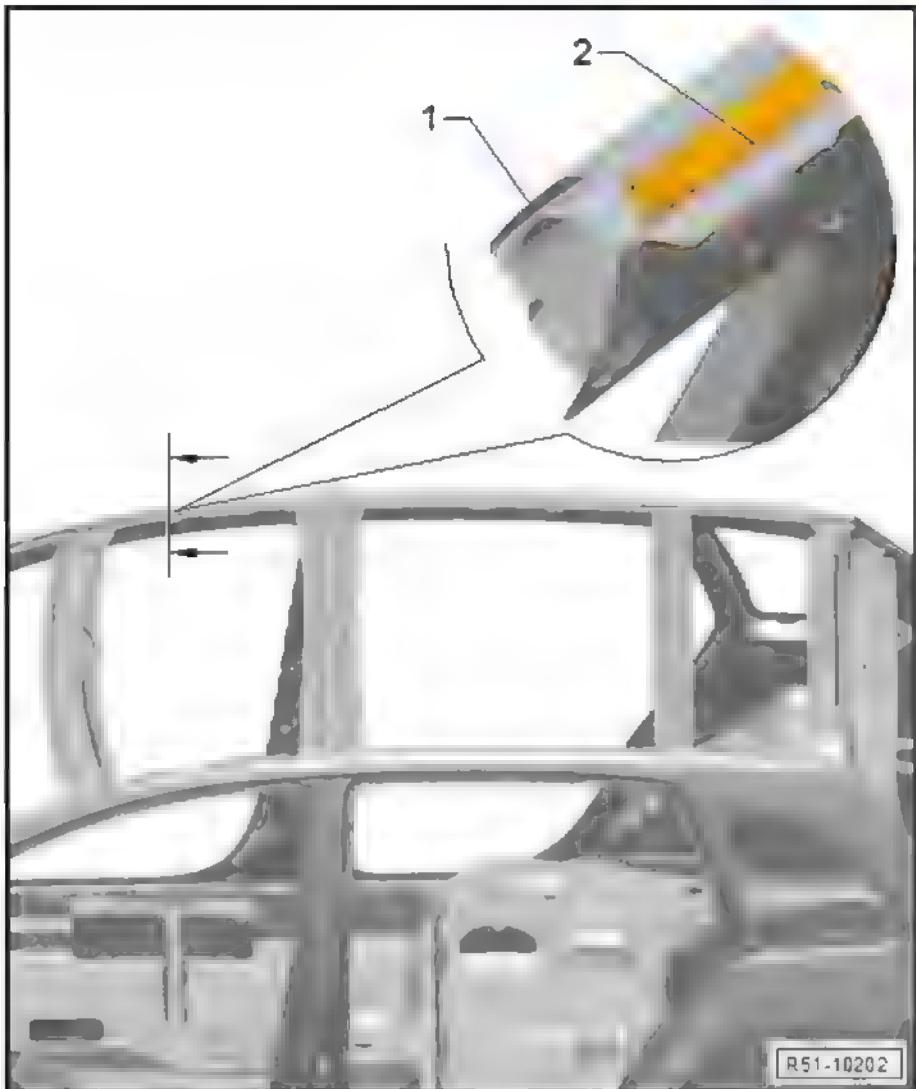
2.2 Remove



1 - Continuous laser bead

- Loosely separate the central part of roof





- Remove plate residues.



Note

- ◆ When plate residues are removed -2- from the central roof part, you must make sure that the side connections -1- (side panels and frames) are not damaged.
- ◆ Do not use cutting or grinding discs.
- Remove all residues of glue and sealing compound from the roof cross member, front and rear sections, and in the roof reinforcement.
- Repair the painting damages on the front and rear roof cross member sections and the roof reinforcement.

2.3 Install



Note

Use of different types and thickness of steel demands appropriate spot welding equipment.



2.3.1 Prepare the new part

Replacement part

- ◆ Central roof section
- ◆ 1K Assembly adhesive - D 190 MKD A3- (1 cartridge 310 ml)
- ◆ 2K Assembly adhesive - D 004 660 M2- (2 cartridges 200 ml)
- ◆ 2K Body adhesive - D 180 003 M2- (2 cartridges 120 ml)
- ◆ Cavity wax - AKR 321 M15 4- or -D 330 KD2 A1-
- ◆ Polyurethane adhesive - AKD 476 KD5 05- (1 cartridge 310 ml)
- ◆ Felts - 533 867 910 B- 15 X 1,5 X 880 mm



Note

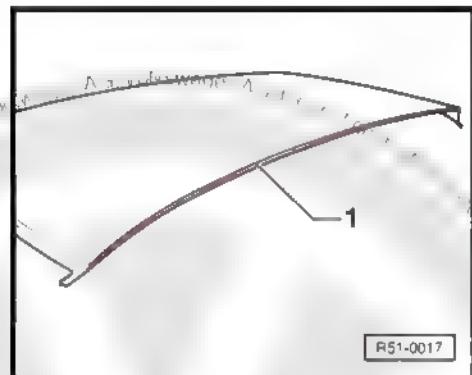
- ◆ To ensure a durable and problem-free roof repair, please follow the work sequence below.
- ◆ The gluing areas must not be filled before the roof central part is glued.

- Use fine sandpaper (grit 360) to leave the gluing area rough.
- Sand the gluing area of the roof internal and external parts -1- left and right side with a sandpaper (grit 800), do not remove primer coat.



Note

Thus, the proper gluing of the 2K body adhesive with pasting area is ensured.





- Place approximately 10 felt parts -1- over the left and right roof frame.
- Place the central roof section over the roof frame and check the roof alignment in relation to the side panels and side frames (visual control).



Note

Verify the adjustment of the central roof section with the rear lid and the windscreen.

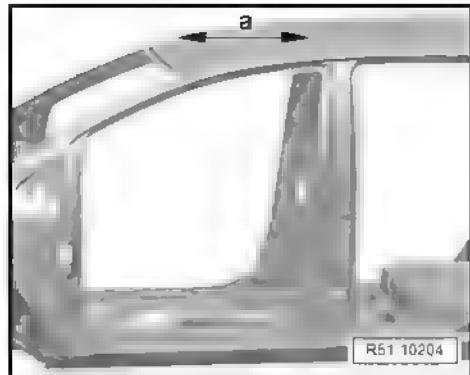


Tension three tensioning straps (commercially available) on the roof as follows:

1. front strap

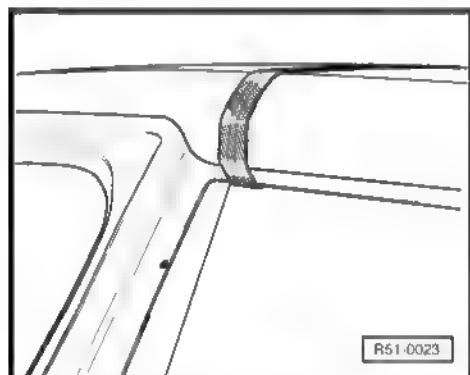
- Measure on both sides of the vehicle, starting on the front roof corner -arrow- (windscreen gap) -at- = 350 mm backwards and mark these points in the vehicle
- Tension the front strap at these markings.

2. central strap

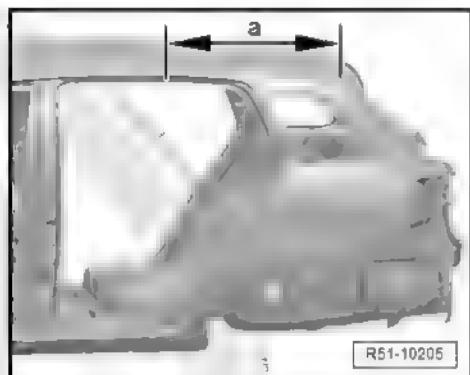


- Align the central strap after the rear corner of the vehicle B-pillar.

3. rear strap



- Measure on both sides of the vehicle starting on the rear roof corner -arrow- (rear lid cut) -at- 350 mm forward and mark these points in the vehicle.
- Tension the rear strap at these markings.



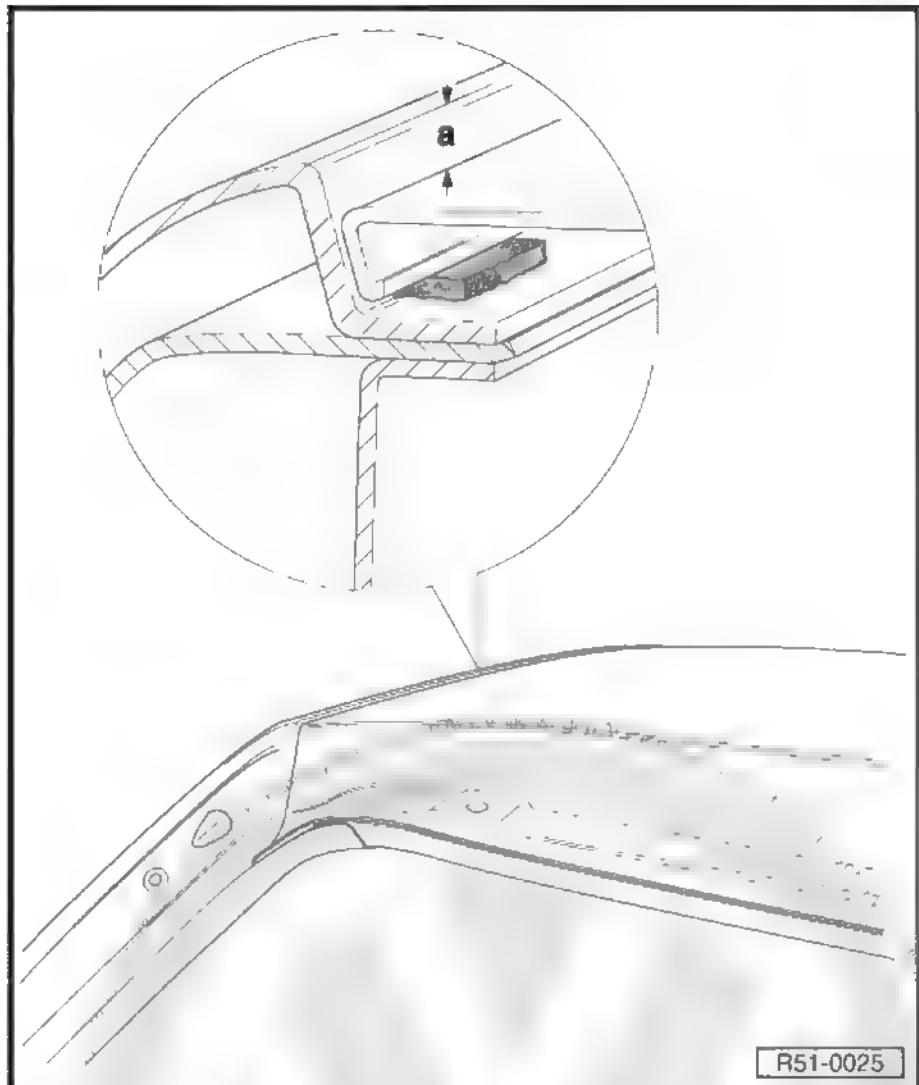
2.3.2 Adjust the depth measurement for the central roof section

The dimension can be adjusted so that the central roof section is lower in relation to the side frame, by tensioning and loosening the tensioning straps.

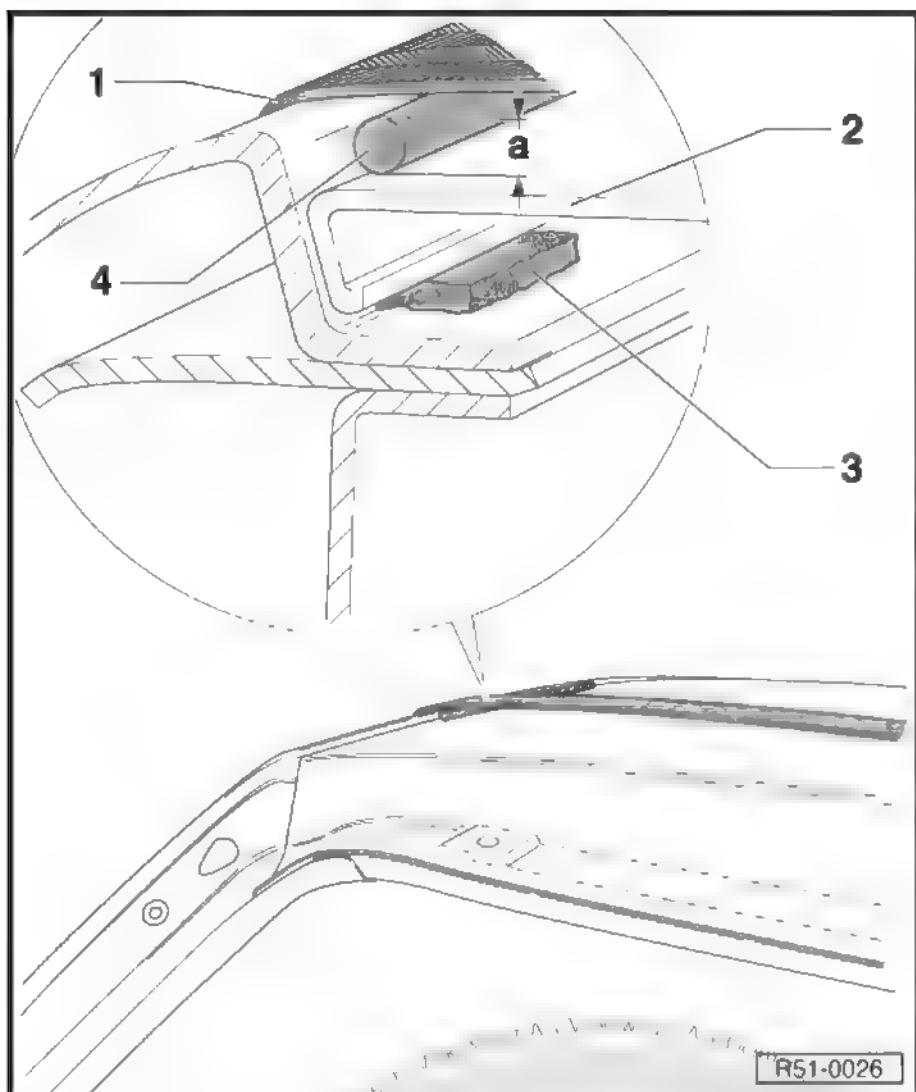


Note

To avoid damage to the central roof section or to the side frame, the tensioning straps cannot be overstretched.



Dimension -a- = 3.0+1 mm



- Use a drill (\varnothing 3.0 mm) to verify the dimension -a- (the drill -4- must move easily between the central roof section -2- and the tensioning strap -1-).
- If necessary, you must change the felt pieces -3- for even alignment of the roof.
- Remove the central roof section again and clean the gluing areas on the central roof section and on the vehicle with silicone remover - LSE 020 100 A3- .

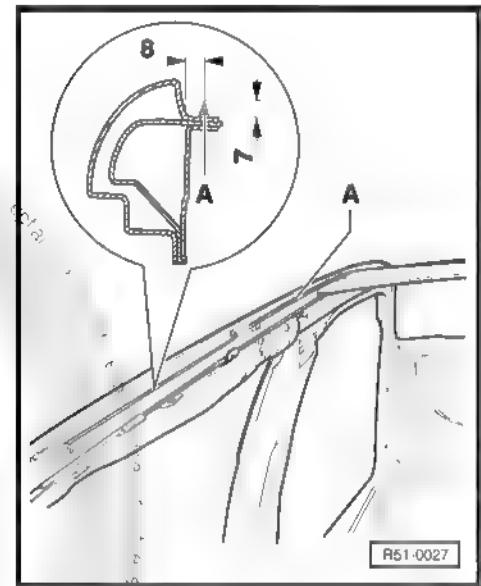


2.3.3 Glue the central roof section

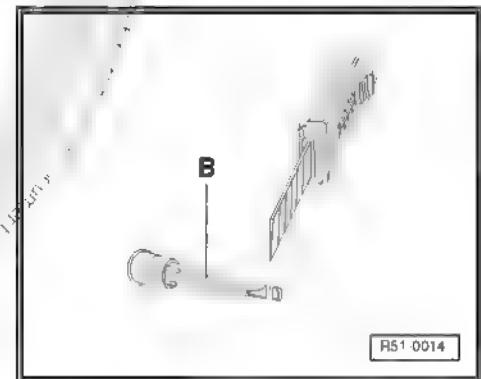


Note

- ◆ The gluing materials must be applied quickly.
- ◆ 2K body adhesive - D 180 003 M2- curing time is of approx. 20 min
- ◆ To apply the gluing materials, you must use compressed air or electric cartridge guns.
- ◆ To apply the adhesive, use the Compressed air gun - V.A.G 1761/1- and Double cartridge gun - VAS 5237- .
- ◆ To heat the adhesive, use the Cartridge heater - V.A.G 1939 A-
- First, apply to the area -A- of the roof frame the 1K assembly adhesive - D 190 MKD A3- with the compressed air gun - V.A.G 1761/1- .



- For this, you must cut 2 mm of the nozzle -B- from 1K assembly adhesive - D 190 MKD A3- to obtain the shape corresponding to the bead.
- Then apply to the area -C-with the 2K body adhesive - D 180 003 M2, using a double cartridge gun - VAS 5237- .



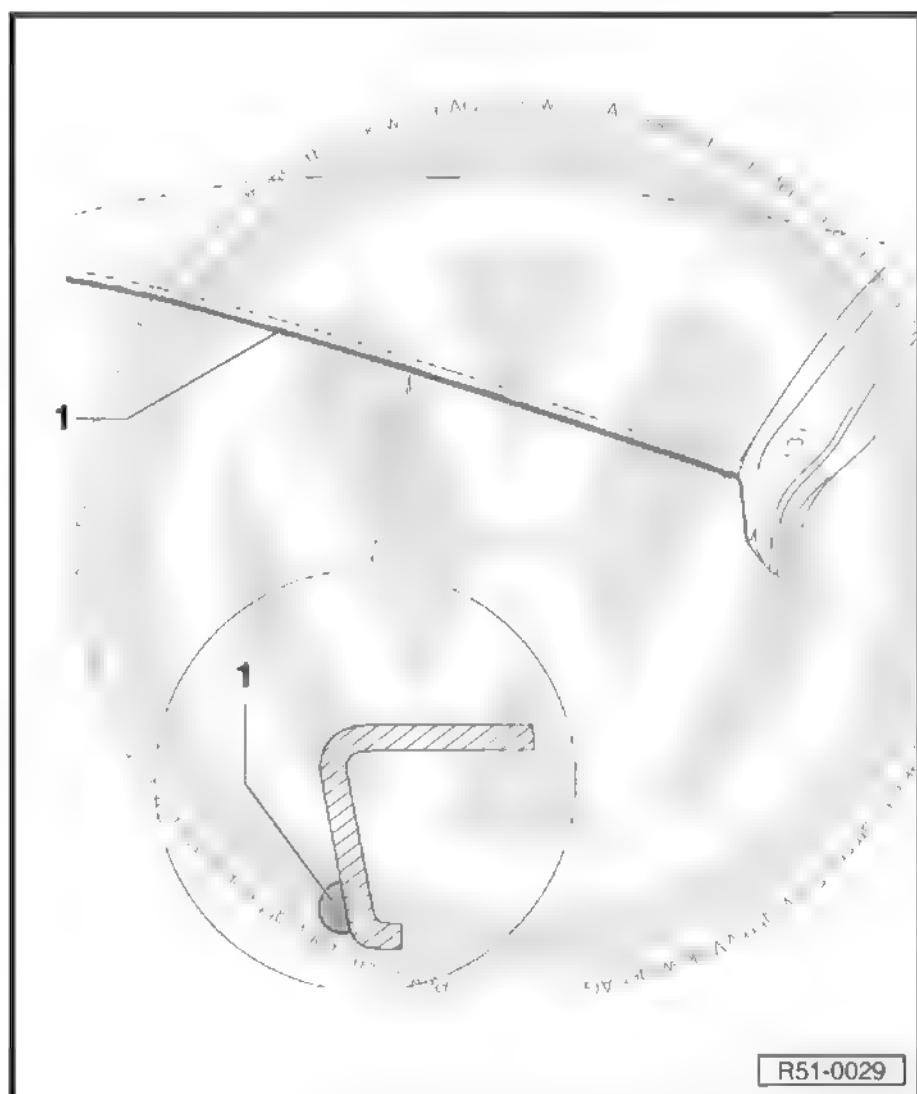
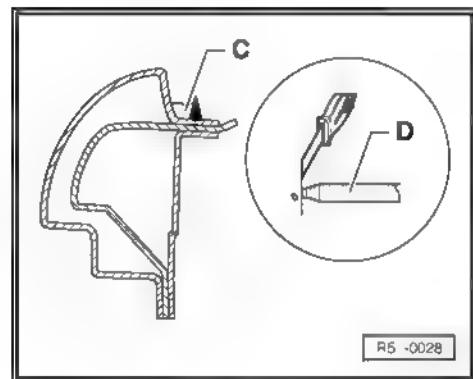


- To do so, you must cut the first stage of the static mixer -D-.



Note

- ◆ Follow minimum adhesive curing time.
- ◆ Carefully press the gun without the static mixer until adhesive comes out evenly from the two cartridge connection chambers
- ◆ Then, thread static mixer to the cartridge connection
- ◆ Apply the first 100 mm of adhesive onto a piece of cardboard and only then start applying on the vehicle.
- ◆ For the following steps, the help of a second person is necessary.



- Apply the 2K body adhesive - D 180 003 M2- -1- onto the central roof section flange with beads of approx 2 mm Ø; immediately place the central roof section and then, align it



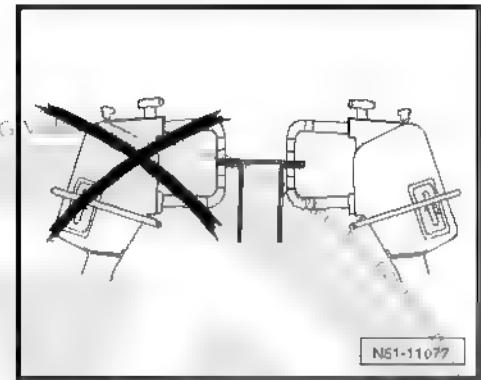
- Fasten the central roof section by the windscreen cut and on the rear lid cut with clips, and the central area with the tensioning straps.
- Immediately remove excessive adhesive in the roof corner with a cloth dampened with silicone remover - LSE 020 100 A3- .
- Verify the depth dimension for the central roof section .

2.3.4 Welding

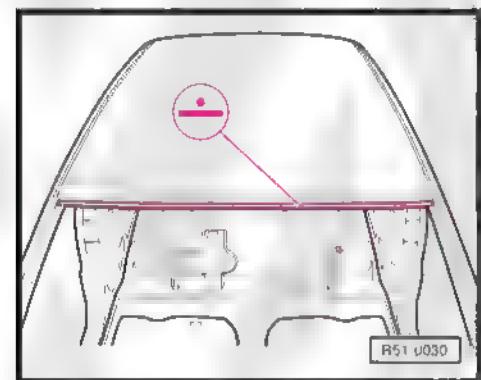


Note

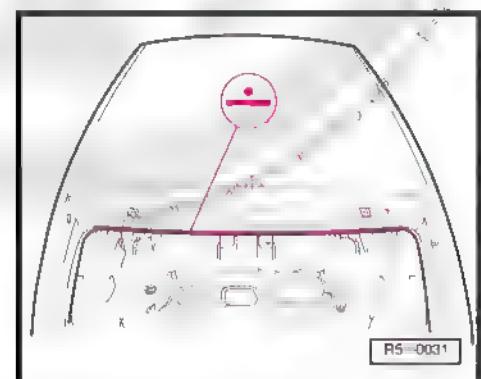
- Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- The rigidity of the set is determined by the weld disposition.



- Weld central roof section in windscreen cut, RP - spot seam (one row).

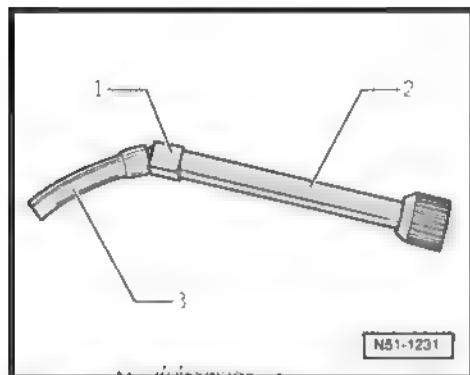


- Weld central roof section in rear door cut, RP - spot seam (one row).
- Press the 1K assembly adhesive - D 190 MKD A3- between the central roof section and the front roof cross member, the rear roof cross member and the roof reinforcement,
- Apply the primer, on the inside, to the right and left sides of the roof frame with the primer - ALN 002 003 04- .





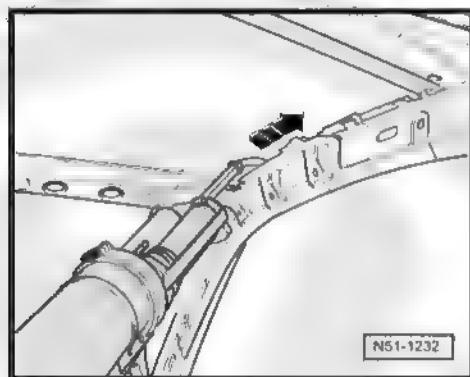
- Extend tip -1- of the static mixer -2- of the 2K glass adhesive -D 004 660 M2- with a piece of commercially available plastic hose -3- approx. 80 mm long (internal diameter 12 mm).



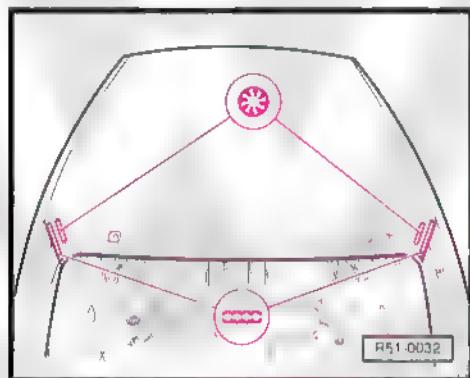
- Press 2K glass adhesive - D 004 660 M2- on the left and right sides, between the central roof section and the roof frame.



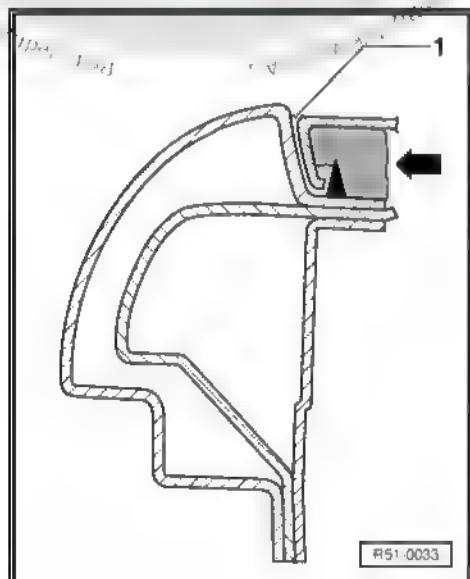
- After gluing, vehicle shall remain immobilized from 8 to 10 hours at ambient temperature (min. 15° C) on a flat surface so that the glued components can dry.
- You can only work on the vehicle again after the drying time elapses.



- Weld the central roof section to the rear door cut, brazing - brass weld bead and SG - hole fulfilment seam.



- Make a slight sealing of the adhesive bead -1- with adhesive sealing compound - AKD 476 KD5 05- with the compressed air gun - V.A.G 1761/1- .
- After painting, apply anti-corrosion fluid (cavity wax) on roof gaps -arrow- with cavity wax - AKR 321 M15 4- or -D 330 KD2 A1- .





RO 51 07 55 50

3 Front roof cross member - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

3.1 Tools

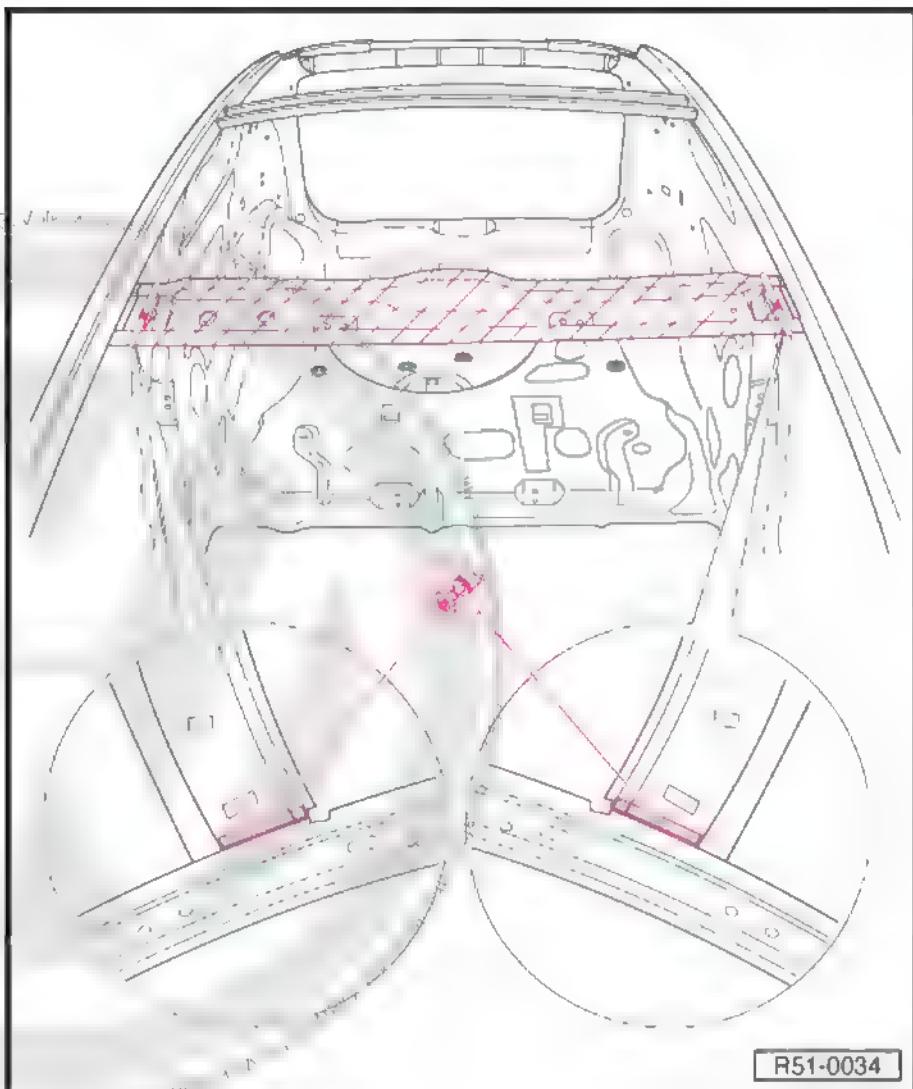


Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.*

3.2 Remove

- Roof removed



- Cut the roof cross member.
- Remove plate residues.

3.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 135.
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair

3.3.1 Welding

Replacement part

- ◆ Roof cross member
- Adjust and fasten the new part.

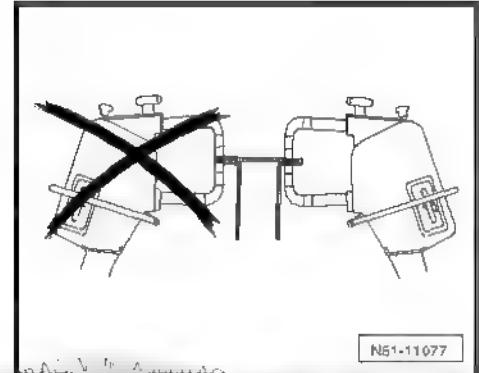


- Verify the adjustment with the central roof section and the windscreen.



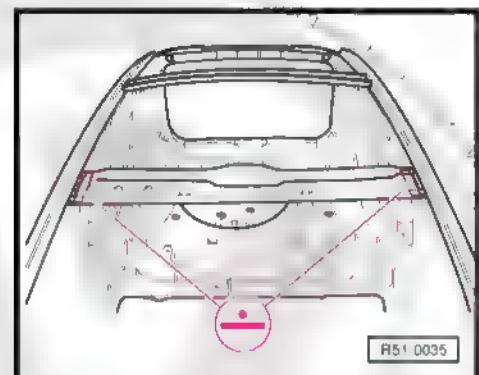
Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*



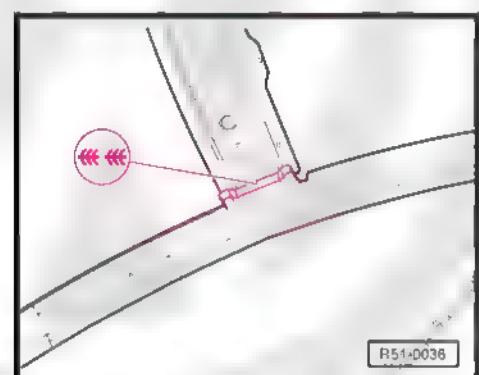
N51-11077

- Weld the new part, RP - spot seam (one row).



R51-0035

- Weld roof cross member as well on the inside and on both sides, SG - seam (discontinuous).
- Install central roof section [⇒ page 113](#).



R51-0036



RO 51 08 55 50

4 Central roof cross member - replace



DANGER!

Follow the safety instructions!

⇒ General Information, Body Repairs, General Body Repairs ;
Safety instructions

4.1 Tools



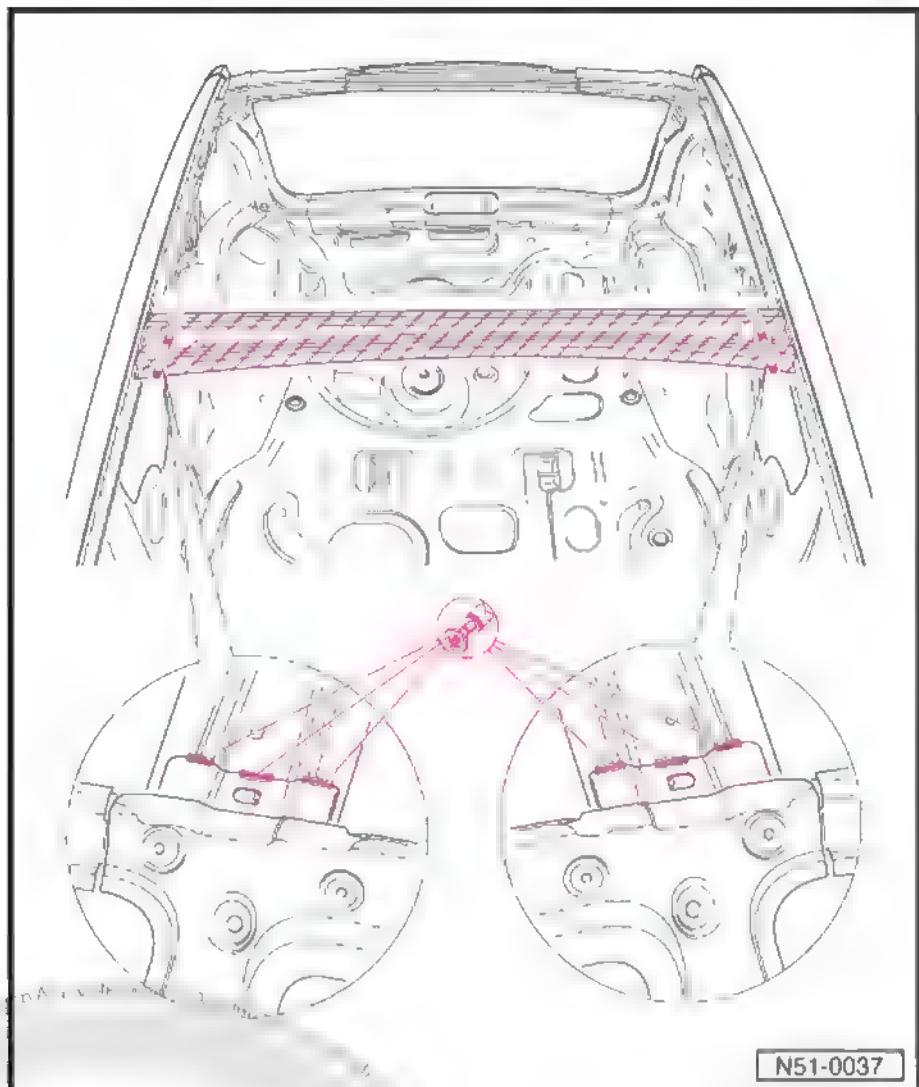
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

4.2 Remove

- Roof removed.





- Undo plate connections.
- Remove plate residues.

4.3 Install

4.3.1 Welding



Note

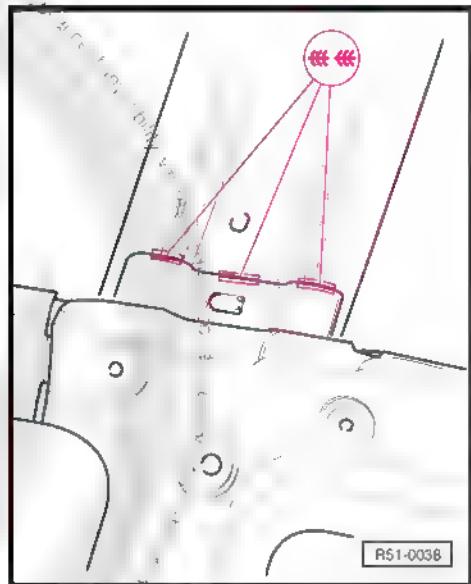
Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair [→ page 138](#)

Replacement part

- ◆ Roof centre cross member
- Adjust and fasten the new part.
- Check the adjustment with the central roof section.



- Weld the new part SG - seam (discontinuous)
- Install central roof section [page 113](#) .





RO 51 09 55 50

5 Rear roof cross member (Fox) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

5.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

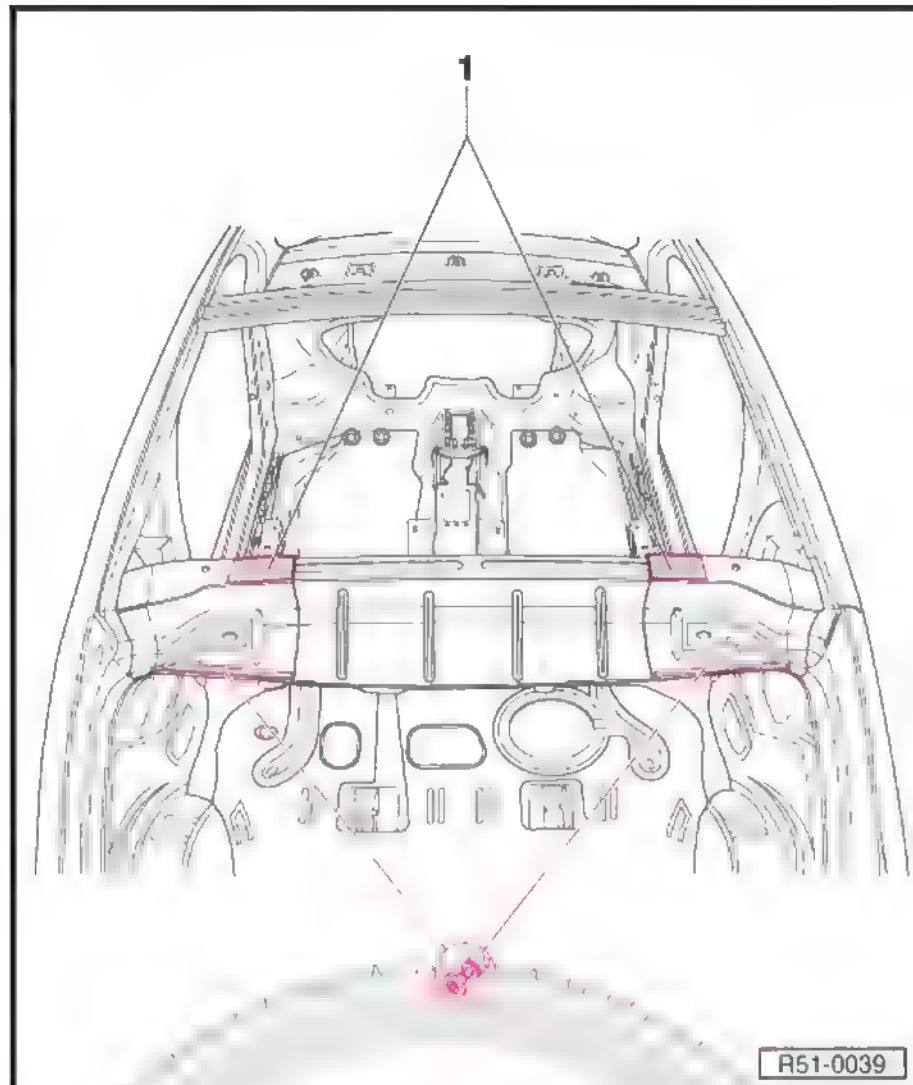
5.2 Remove

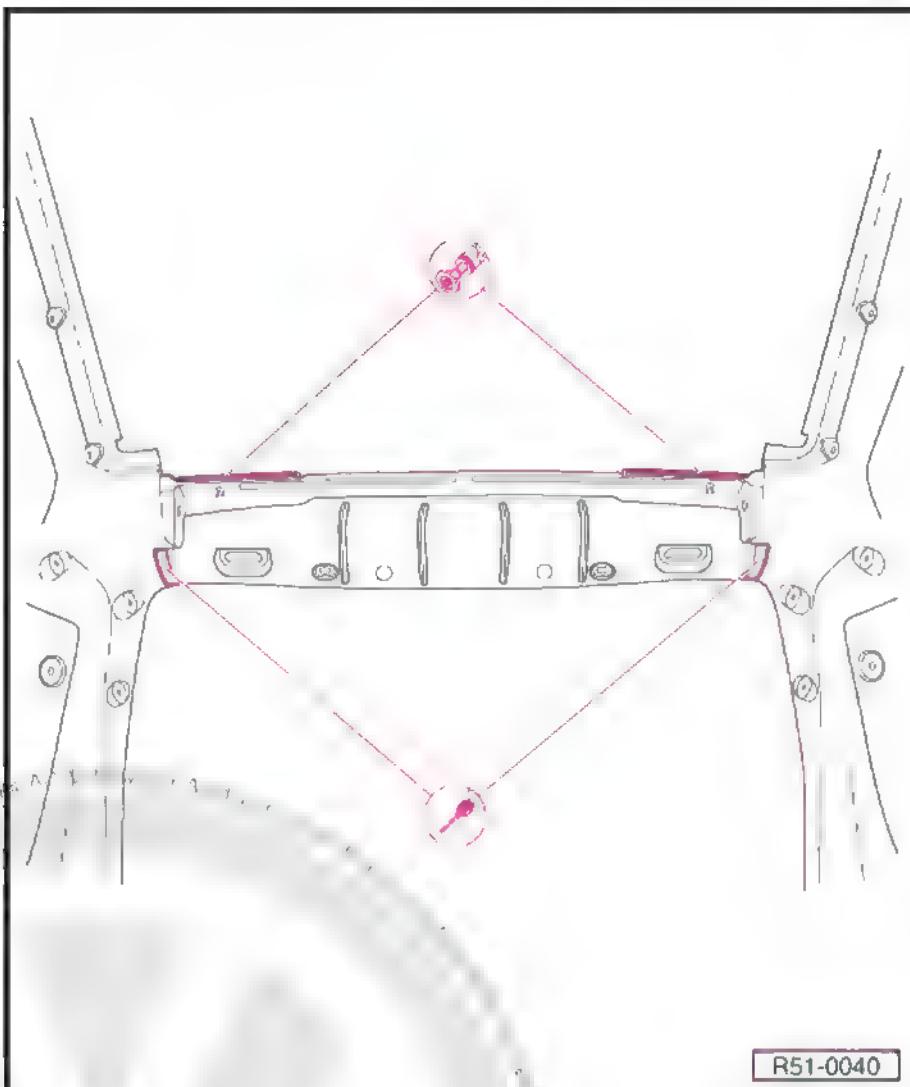
- Roof removed



1 - Stuck area

- Undo the original connection from the outside.





- Undo the original connection from the inside.
- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.

5.3 Install



Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair → [page 141](#)

5.3.1 Prepare the new part

Replacement part

- ◆ Rear roof cross member
- ◆ 1K Assembly adhesive - D 190 MKD A3-
- Make holes for pointing weld spots, Ø 8 mm.

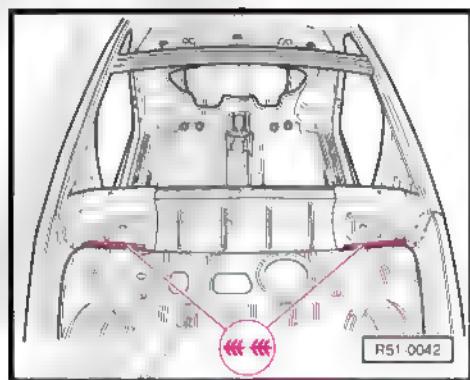
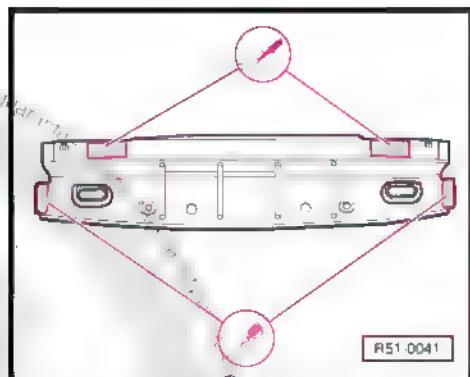


- Apply adhesive on the sticking area. 2 beads with \varnothing 3.5 mm.

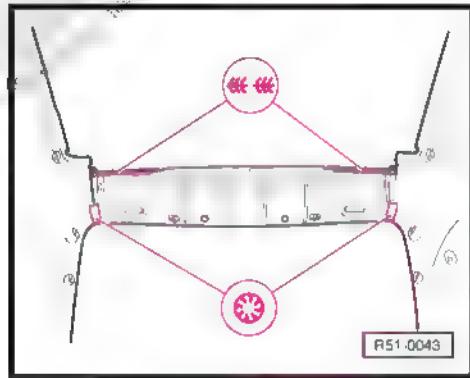


The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Verify the adjustment with the central roof section and the rear lid.
- Weld the roof cross member from the outside, SG - seam (discontinuous).



- Weld the roof cross member from the inside, SG - seam (discontinuous) and SG - hole fulfilment seam.
- Install roof [page 113](#).





6 Rear roof cross member (Spacefox) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs;
Safety instructions

6.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

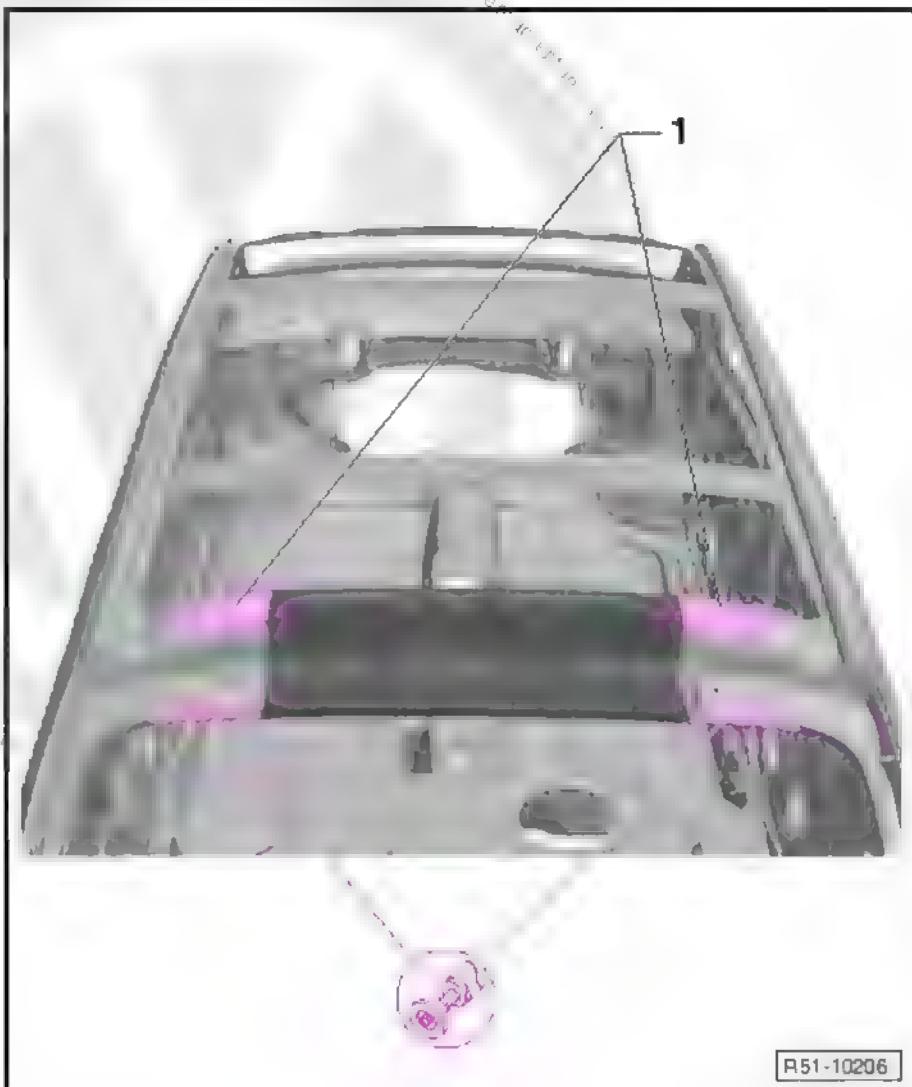
6.2 Remove

- Roof removed

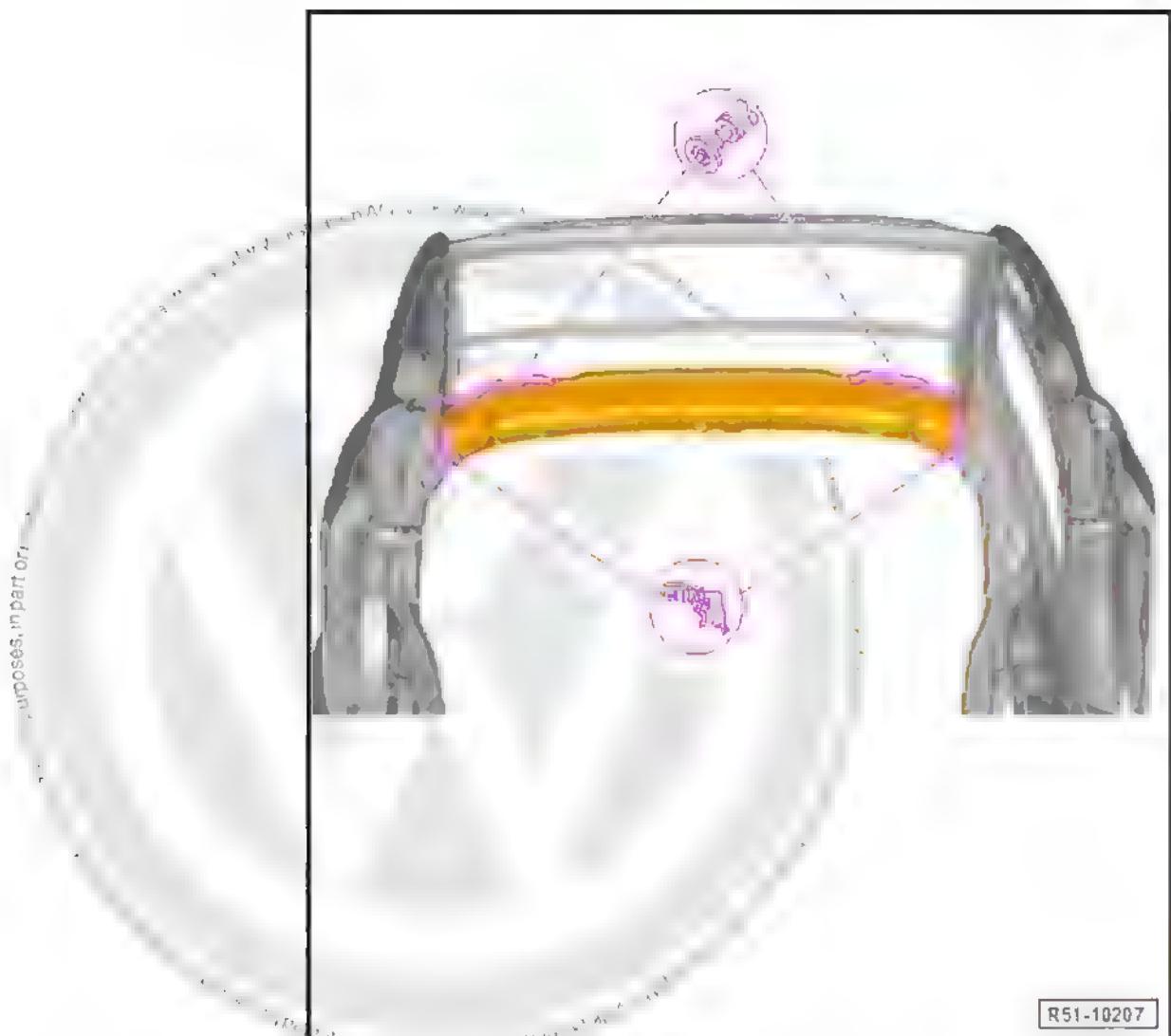


1 - Stuck area

- Undo the original connection from the outside.



- Undo the original connection from the inside.



- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.

6.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 145](#)
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

6.3.1 Prepare the new part

Replacement part

- ◆ Rear roof cross member
- ◆ 1K Assembly adhesive - D 190 MKD A3-



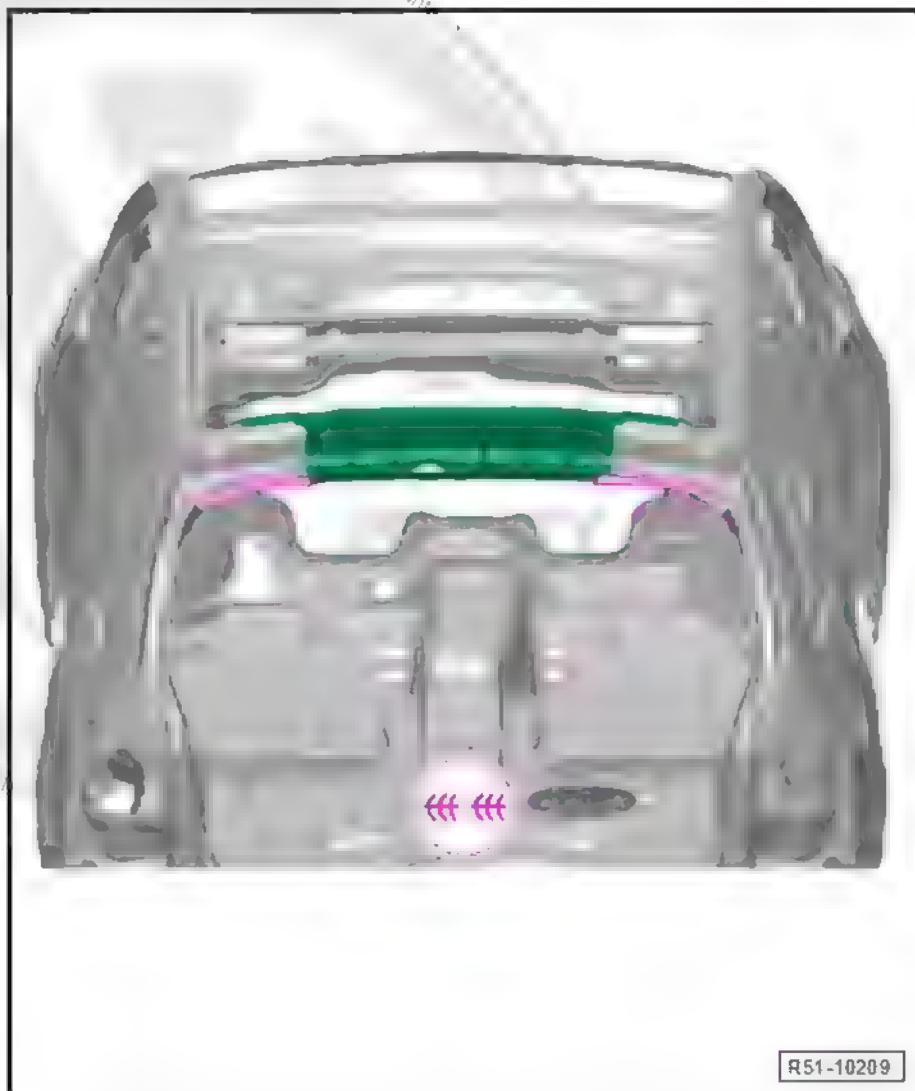
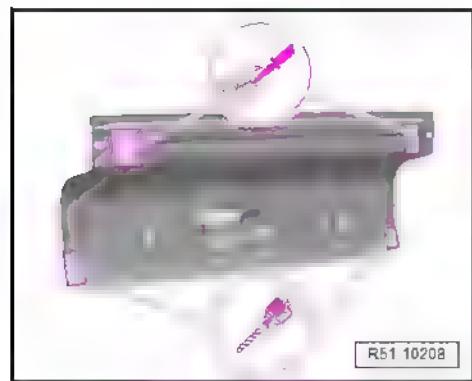
- Make holes for pointing weld spots, Ø 8 mm.
- Apply adhesive on the sticking area. 2 beads with Ø 3.5 mm



Note

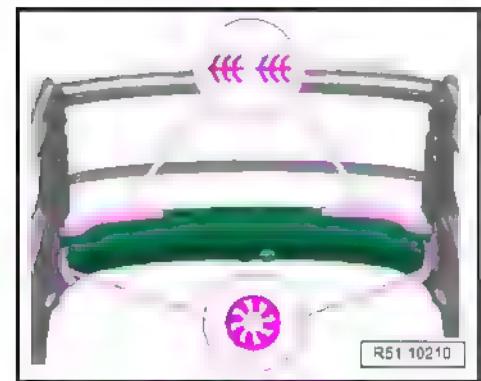
The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Verify the adjustment with the central roof section and the rear lid.





- Weld the roof cross member from the outside, SG - seam (dis-continuous).
- Install roof [→ page 123](#).





RO 51 37 55 00

7 A-pillar (external section) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information: Body Repairs, General Body Repairs :
Safety instructions

7.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

7.2 Remove



1 - Stuck area

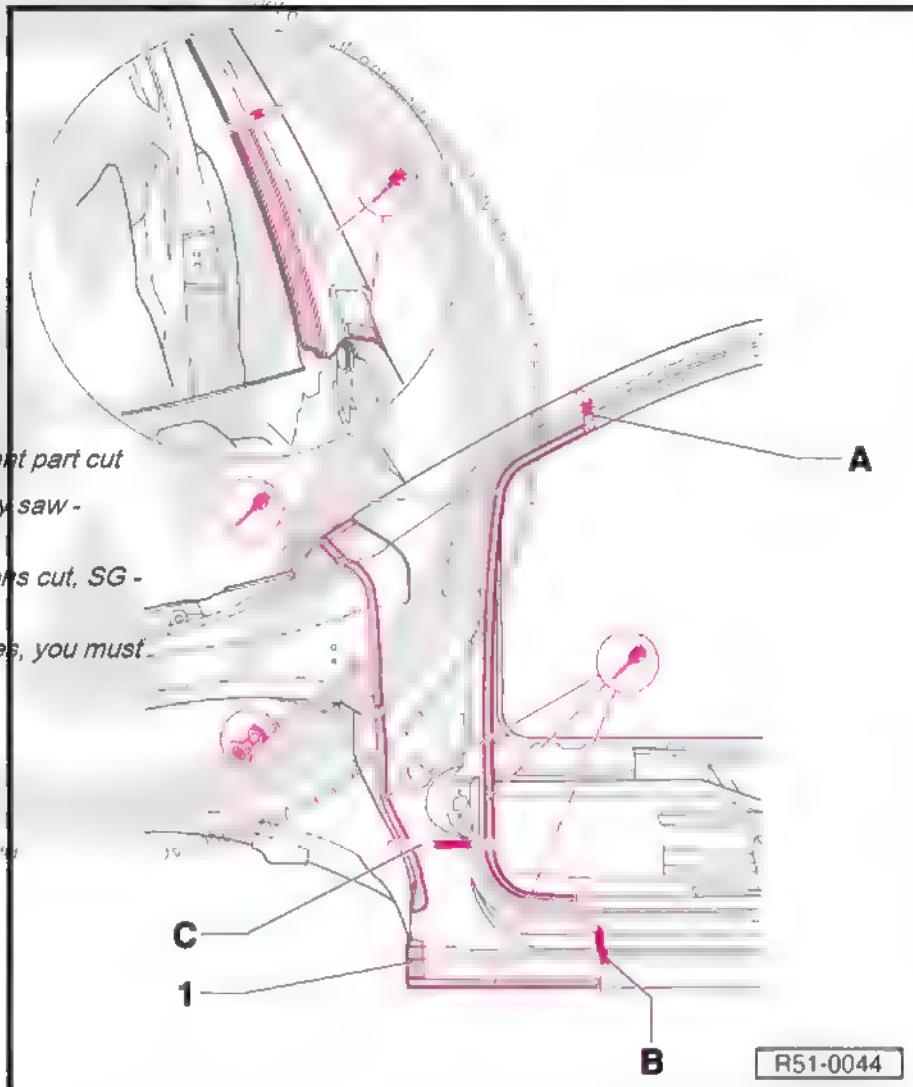
Foam residues shall be scraped as much as possible before sanding tasks.

- Cut pillar -A- according to damage.
- Cut lower longitudinal member -B- as indicated. Do not damage internal reinforcements.

Note

- ◆ Observe replacement part cut
- ◆ Only cut with a body saw - V.A.G 1523- !
- ◆ Butt weld connections cut, SG - backstitch seam.
- ◆ To even irregularities, you must use filling putty 2K.

- Undo plate connections.



Partial renewal

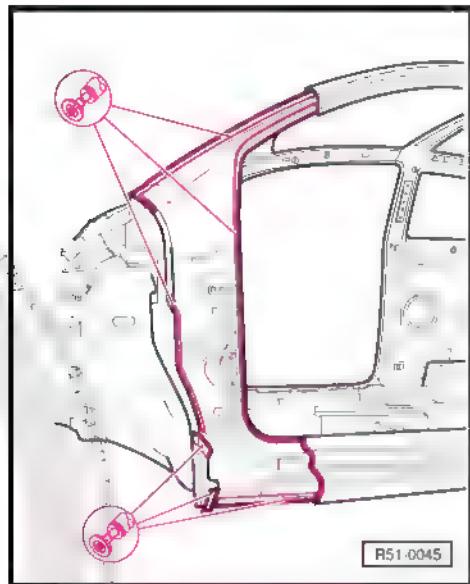
With cut -C-, a replacement may be carried out, according to the damage.

Do not damage internal reinforcements.

The reinforcements may be felt through the openings.



- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible



7.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 150
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

7.3.1 Prepare the new part

Replacement part

- ◆ Partial part on A-pillar with the lower longitudinal member
- ◆ Foam part/support
- ◆ 2K body adhesive - D 180 003 M2-
- Transfer pillar cut to the new part and cut

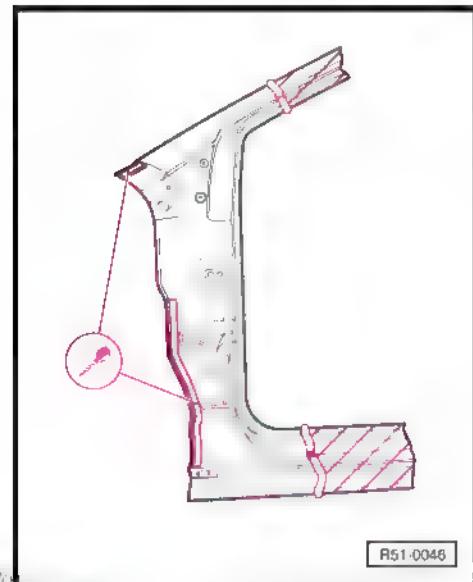


- Make holes for SG - hole fulfilment seam, Ø 8 mm.
- Apply adhesive on the sticking area, 2 beads with Ø 3.5 mm.



Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified



7.3.2 Foam parts/supports

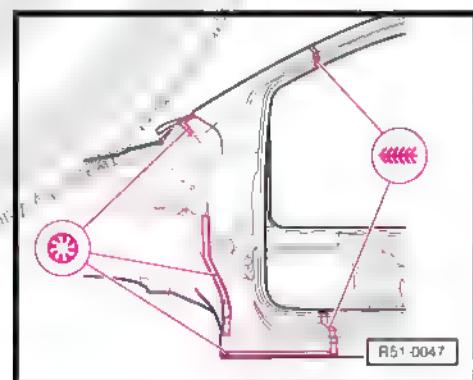
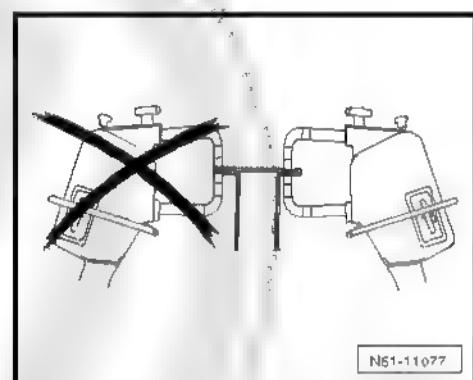
Follow repair instructions ↗

7.3.3 Welding



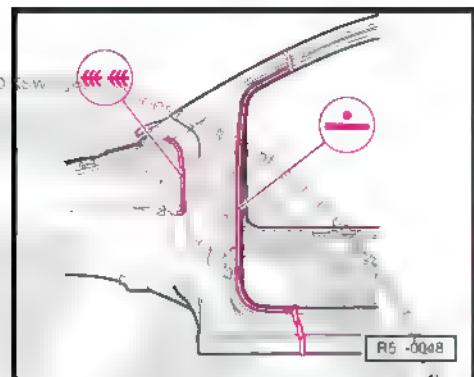
Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- *The rigidity of the set is determined by the weld disposition.*
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the adjustment with other parts.
- Weld A-pillar, SG - hole fulfilment seam.
- Butt weld the cuts, SG - continuous seam.

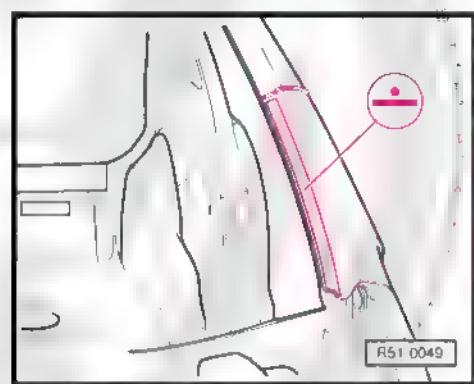




- Re-establish original connection, RP - spot seam (one row) and SG - seam (discontinuous).



- Re-establish other connections in windscreen gap, RP - spot seam (one row).





RO 51 38 55 50

8 A-pillar (internal section) - replace



DANGER!

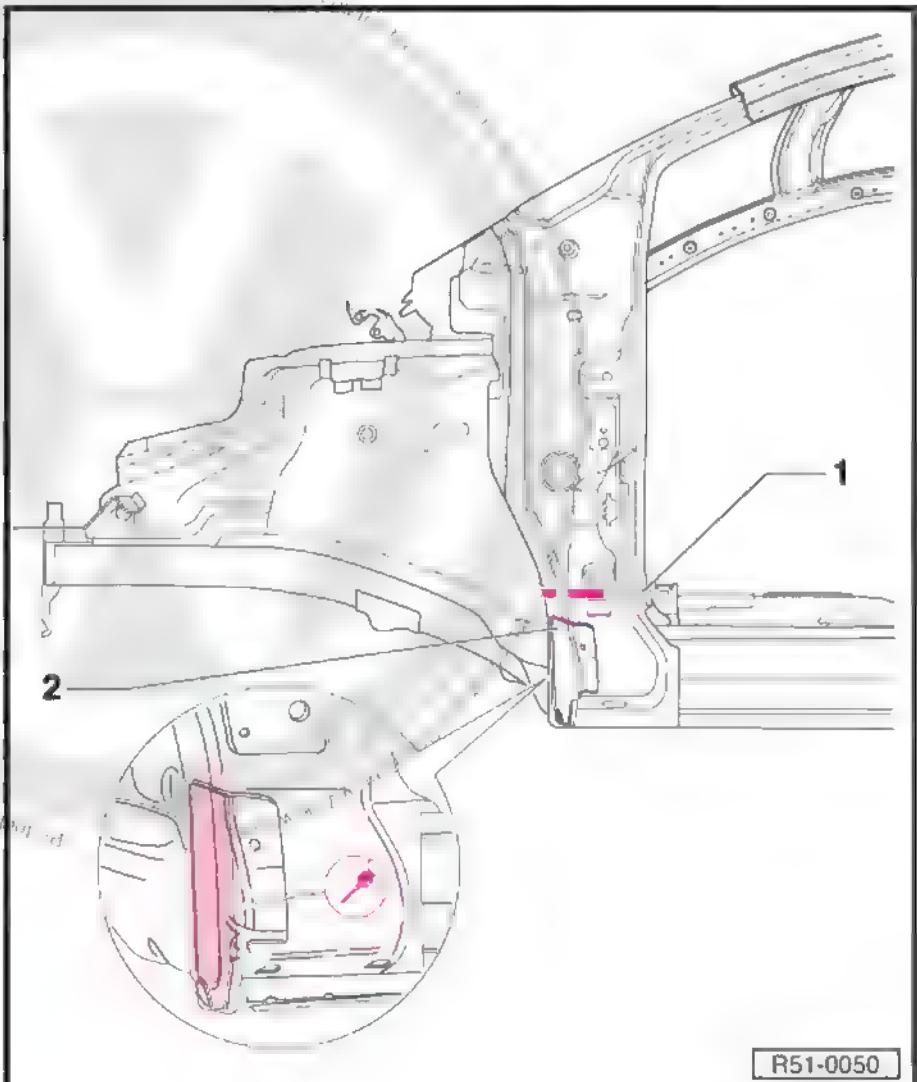
Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

8.1 Remove

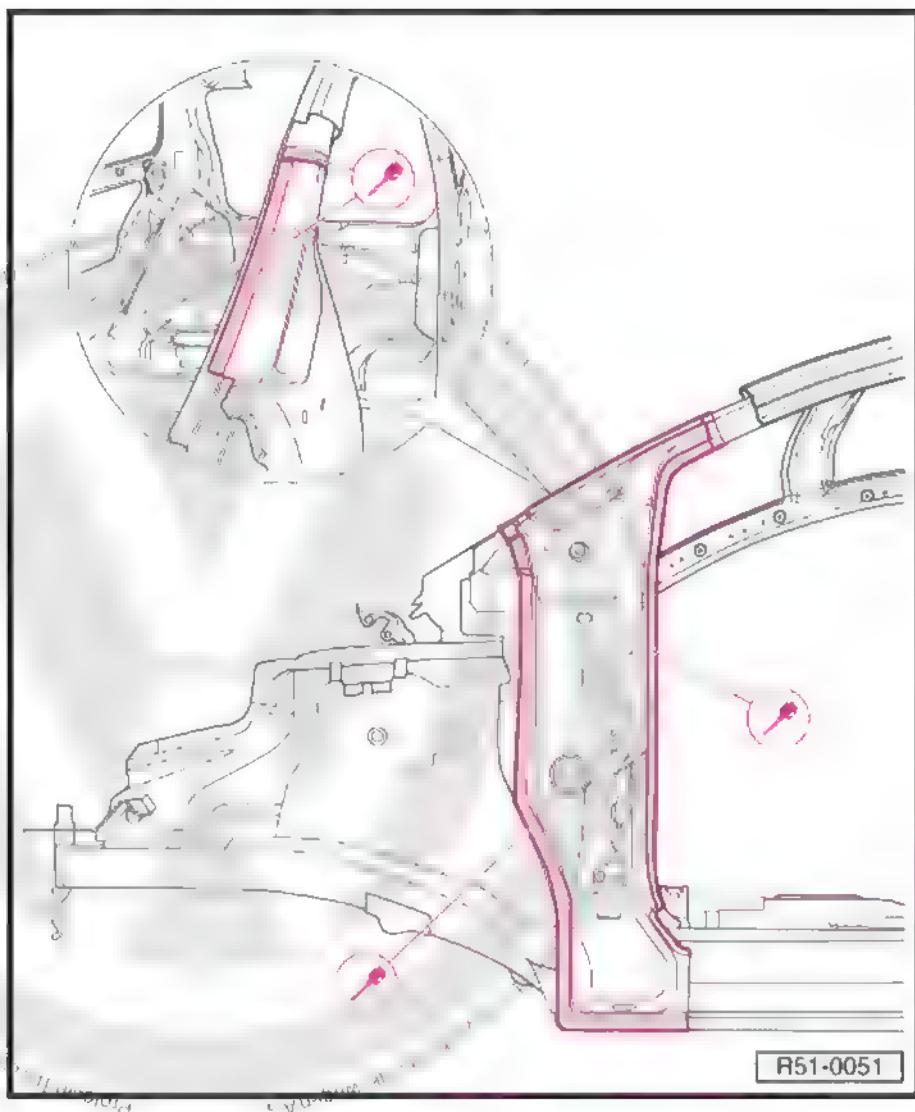
Foam residues shall be scraped as much as possible before
sanding tasks.





With cut -1- it is possible to partially replace the internal section of the A-pillar without the need for disassembling or damaging the lower longitudinal member reinforcement.

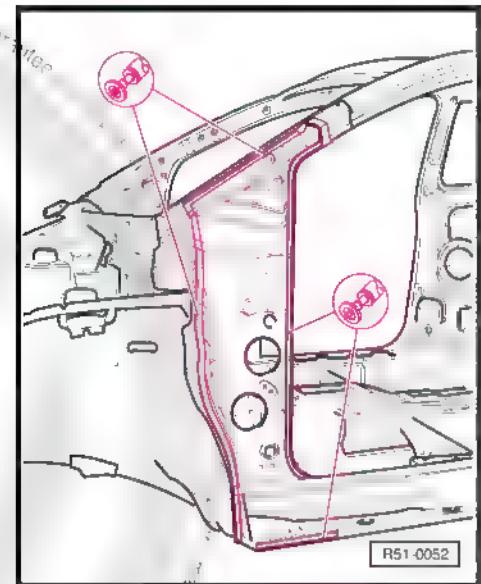
- Drill plate -2- and reuse it if necessary.



- Undo plate connections.



- Remove plate residues



8.2 Install



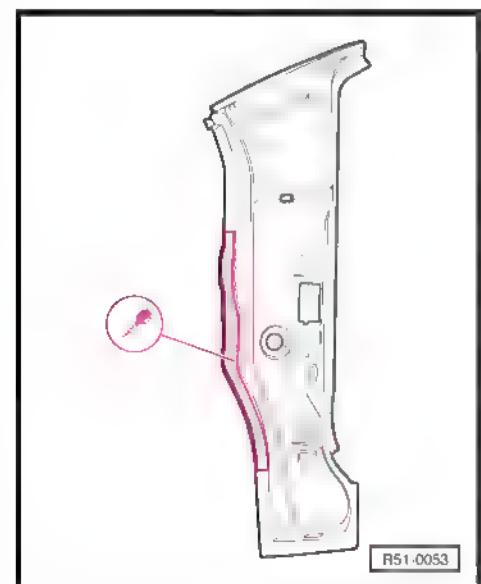
Note

Use of different types and thickness of steel demands appropriate spot welding equipment.

8.2.1 Prepare the new part

Replacement part

- ◆ Internal A-pillar
- ◆ Foam part/support
- Make holes for SG - continuous seam, Ø 8 mm.





8.2.2 Foam part/support

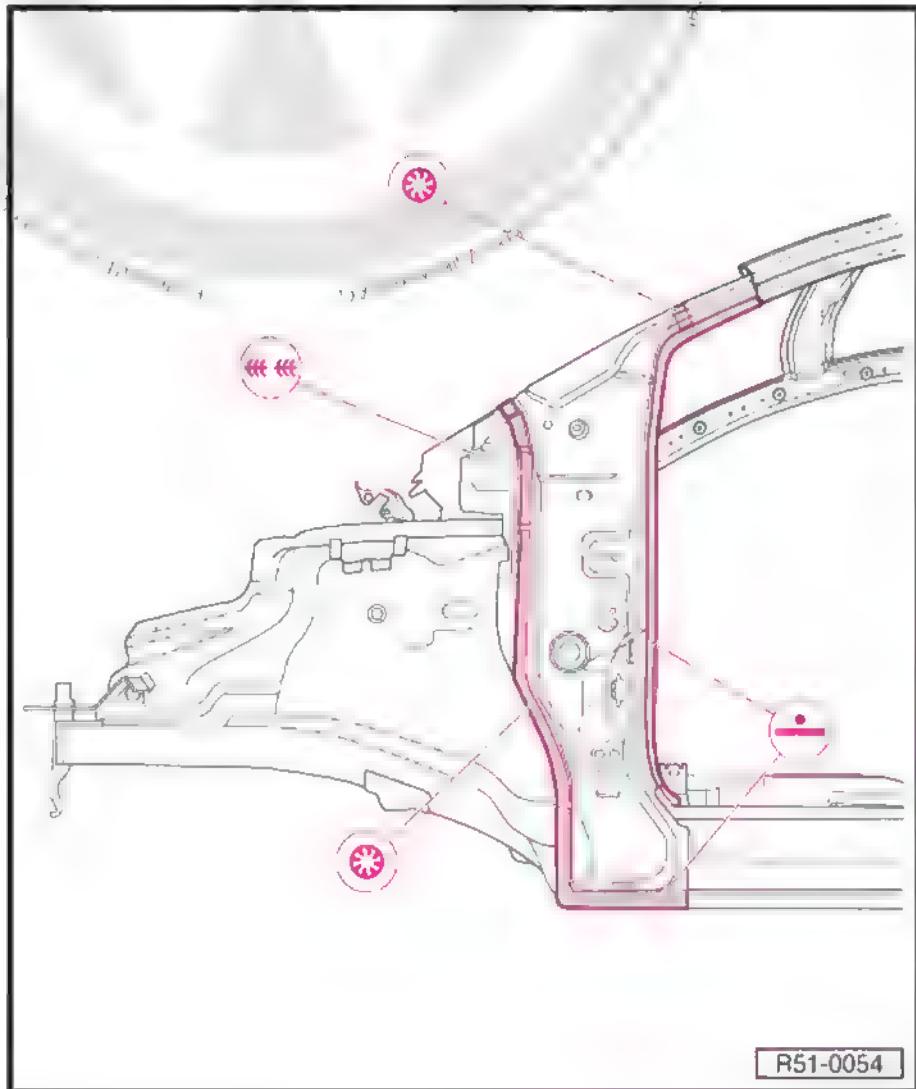
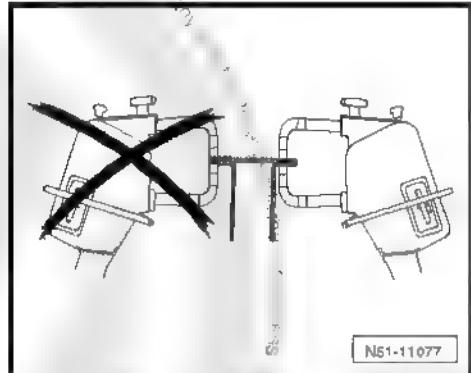
Follow the repair instructions .

8.2.3 Welding



Note

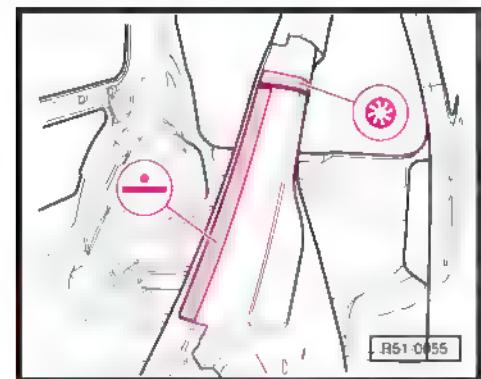
- ♦ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ♦ *The rigidity of the set is determined by the weld disposition.*
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the adjustment with other components.



- Weld the new part, SG - hole fulfilment seam and SG - seam (discontinuous).
- Re-establish original connection, RP - spot seam (one row).



- Weld internal part of A-pillar in windscreen cut, RP - spot seam (one row).
- Install the external section of A-pillar [→ page 152](#).





RO 514155 12

9 B-pillar (4 doors - external section) - replace



WARNING

Observe safety instructions!

Safety instructions ➤ General notes; Body repairs, Body assembly works; Safety-related notes.

9.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ➤ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ➤ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

9.2 Remove



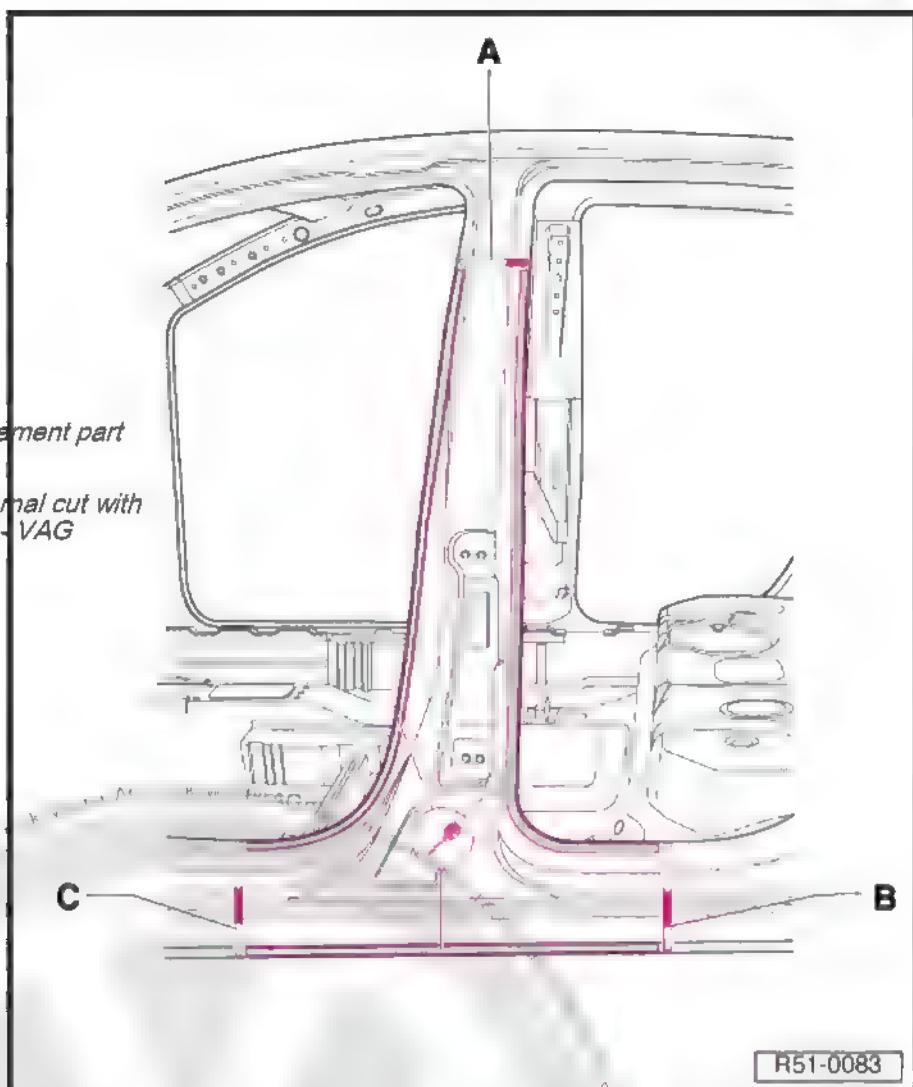
1 - B-pillar cutting line for replacement

- ◆ Cut the B-pillar plate on line -A-.
- ◆ Cut the B-pillar plate on line -B- and -C-.
- ◆ Always pay attention to the damage level
- ◆ Undo plate connections.



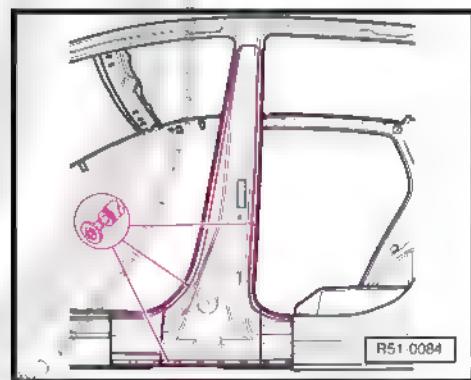
Note

- ◆ *Observe the replacement part cut.*
- ◆ *Only make the external cut with the pneumatic saw - VAG 1523A-.*



9.2.1 Part replacement

- Sand connection surfaces until exposing the bare metal.
- Clean the connection areas by making them free of dust and grease.





9.3 Install

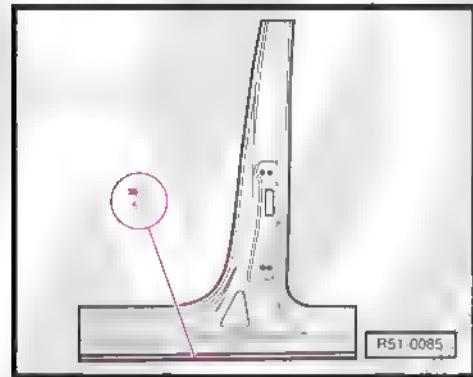


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 160](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

9.3.1 Replacement part preparation

- ◆ External B-pillar
 - Cut the replacement part following the cut lines established on the body -A-, -B- and -C-.
 - Make Ø 8 mm holes for SG - continuous seam.

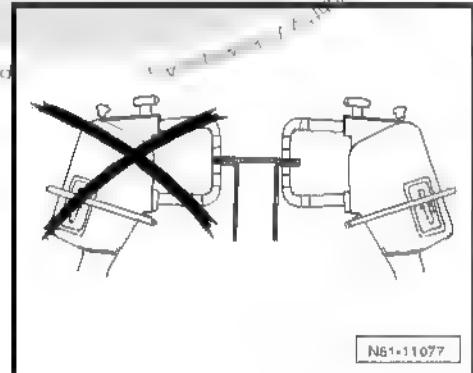


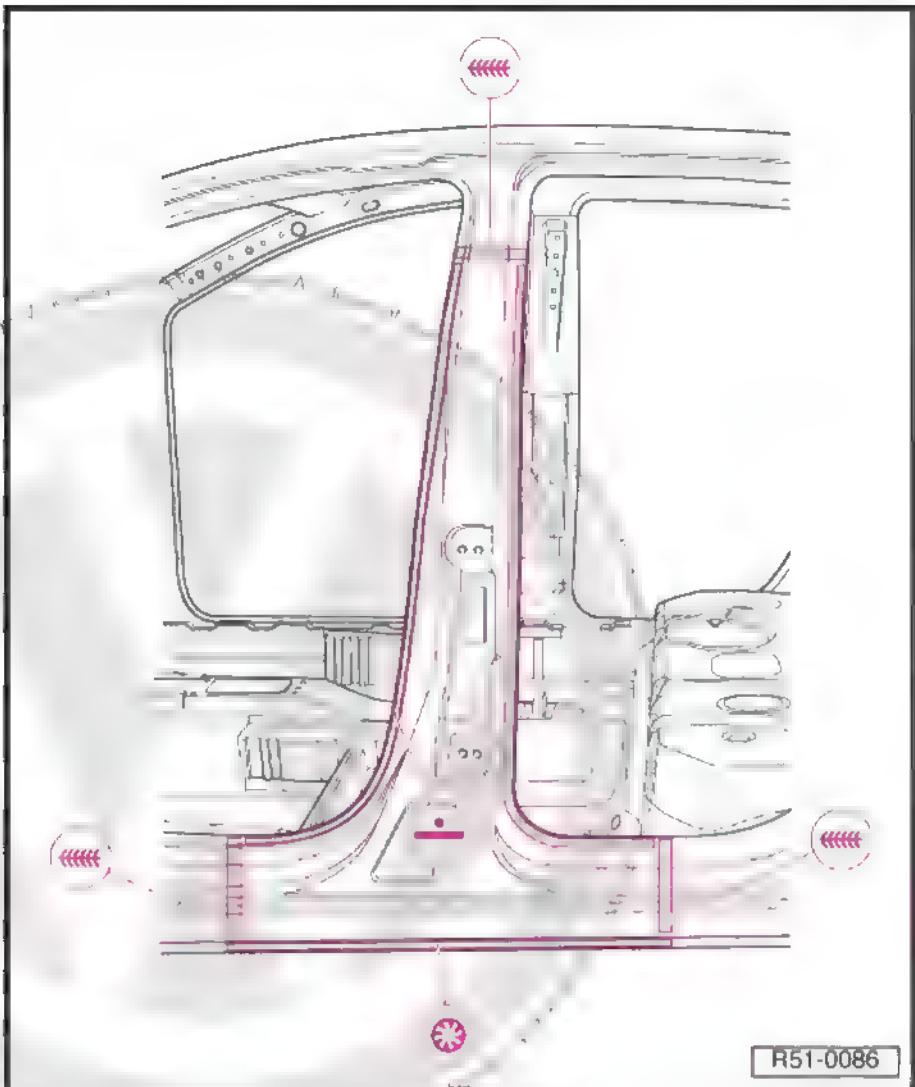
9.3.2 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- ◆ Use of different types and thickness of steel demands appropriate spot welding equipment.





- Adjust and fasten the new part with the vehicle supported on its wheels or on the alignment platform.
- Check the body dimensions (door clearances).
- Weld sides of B-pillar with RP - spot seam (one row).
- Weld upper section with SG - seam (discontinuous).
- Weld lower section with SG - hole fulfilment seam.



RO 51 42 55 50

10 B-pillar (2 doors - internal section) - replace



WARNING

Observe safety instructions!

Safety instructions ➤ General notes; Body repairs, Body assembly works; Safety-related notes.

10.1 Tools

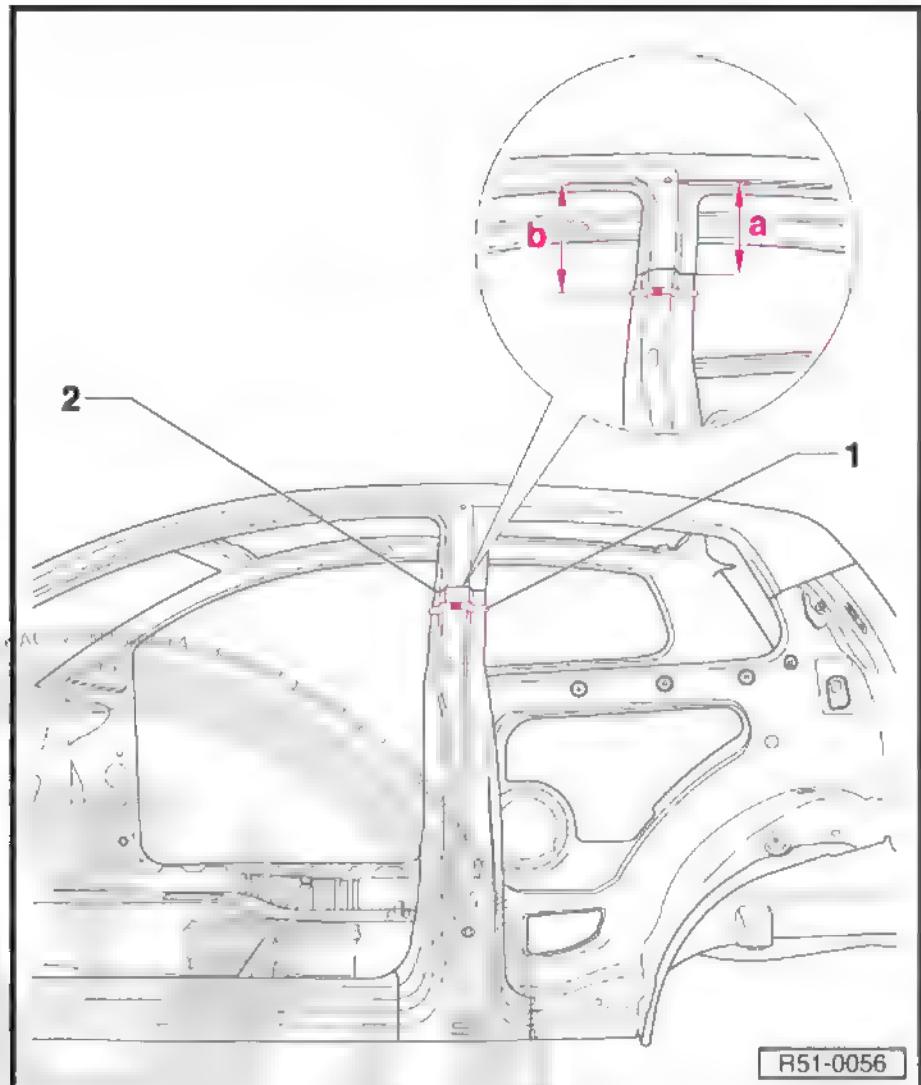


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ➤ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ➤ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

10.2 Remove

- Side back panel removed.

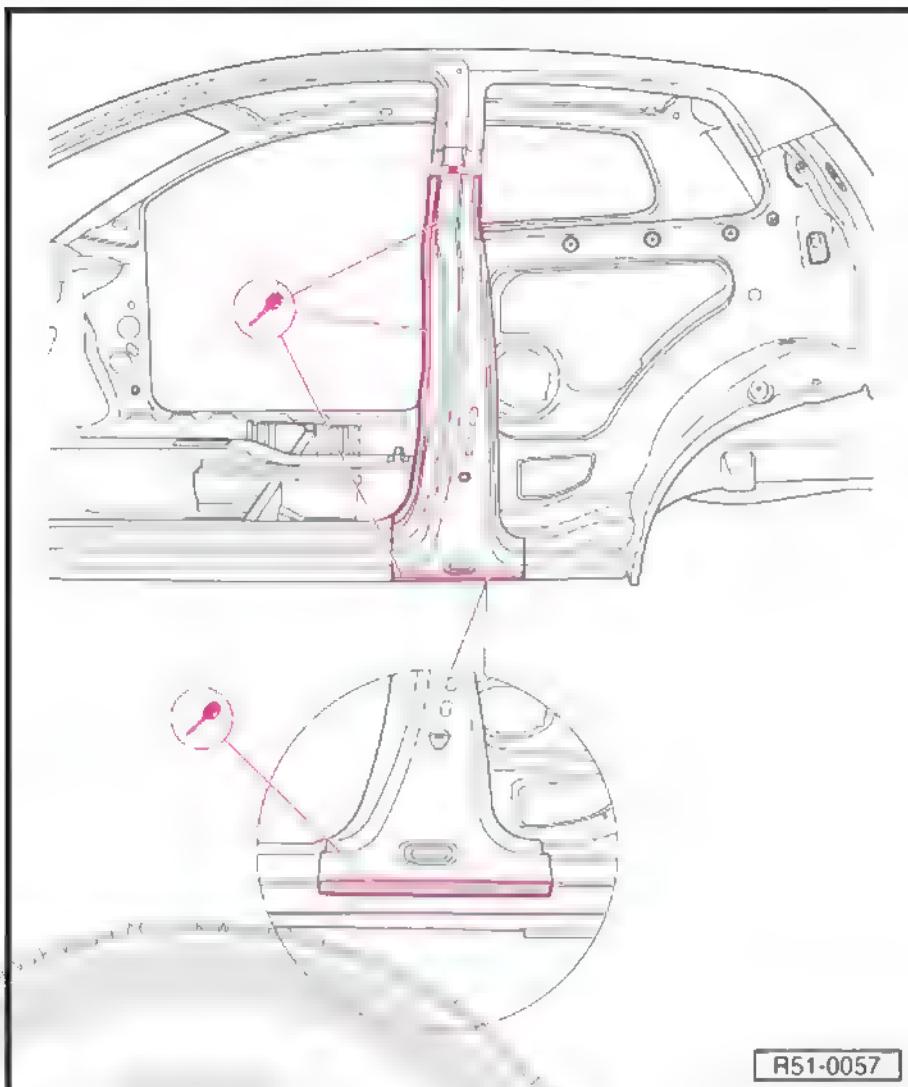


purposes, part of



Note

- ◆ The plate cut in line -1- of B-pillar should be 50 mm below the plate cut of line-2- of the side panel.
- ◆ Dimension -a- 200 mm from roof corner and dimension -b- 250 mm from roof corner.



- Undo plate connections.
- Undo the B-pillar plate joining points at the lower longitudinal member.
- Remove plate residues.

10.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 164
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

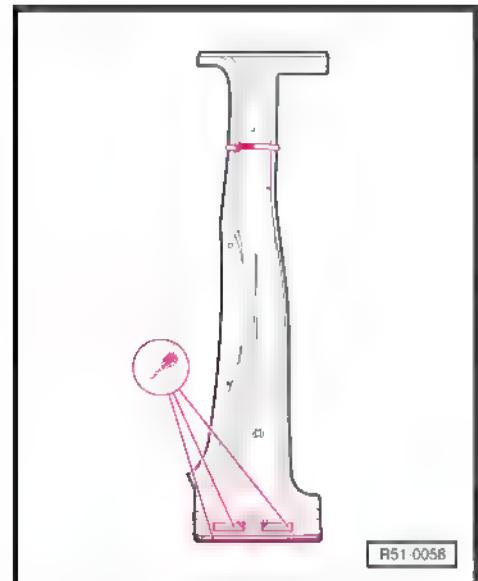
10.3.1 Prepare the new part

Replacement part

- ◆ Internal B-pillar



- Cut the replacement part following the cuts established on the body.
- Make Ø 7mm holes for SG - continuous seam.

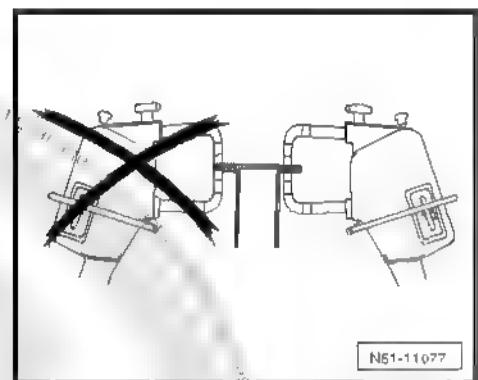


10.3.2 Welding

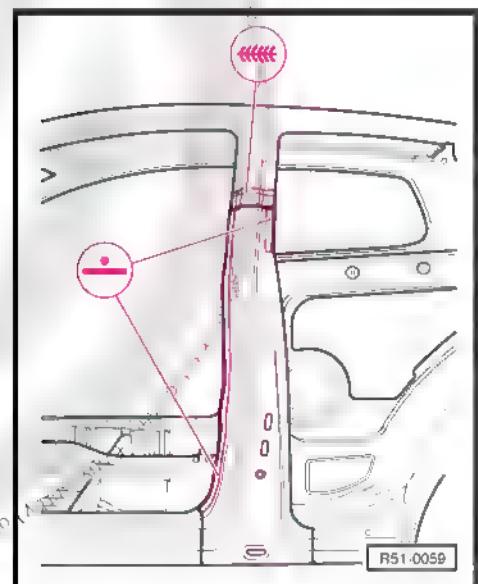


Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust and fasten the inner section of the B-pillar with the vehicle on its wheels or on the alignment workbench.

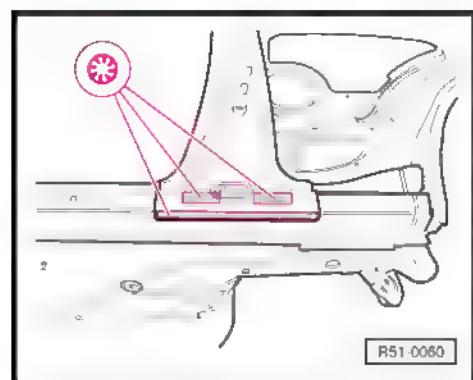


- Check the clearance dimensions with other components.
- Weld internal section of B-pillar sides with RP - spot seam (one row).





- Weld upper section with SG - continuous seam.
- Weld lower section with SG - hole fulfilment seam.





RO 5142 55 60

11 B-pillar (4 doors - internal section) - replace



WARNING

Observe safety instructions!

Safety instructions ⇒ General notes; Body repairs, Body assembly works; Safety-related notes.

11.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

11.2 Remove

- ◆ External B pillar removed.



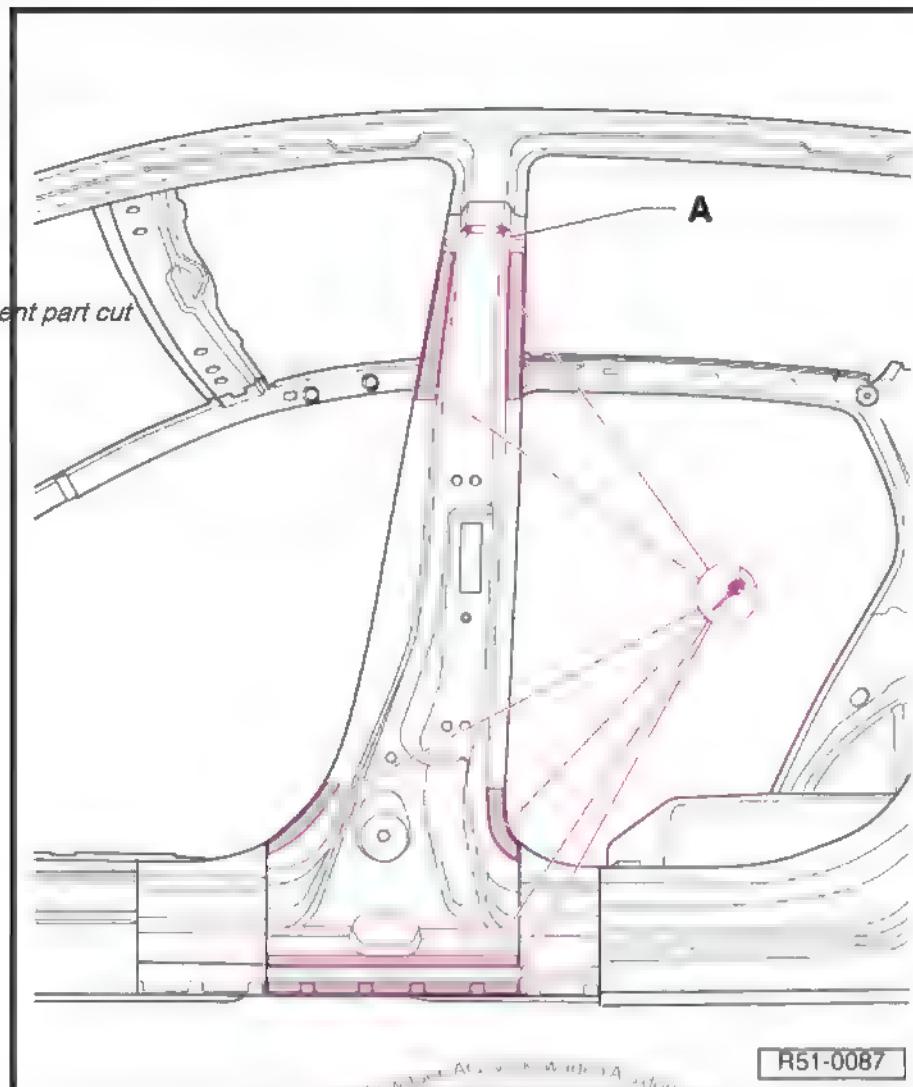
1 - Cutting line for replacement

- ◆ Cut the B pillar plate on line -A- above the seat belt fastening region, 50 mm below the outer B pillar plate cut.
- ◆ Undo plate connections.



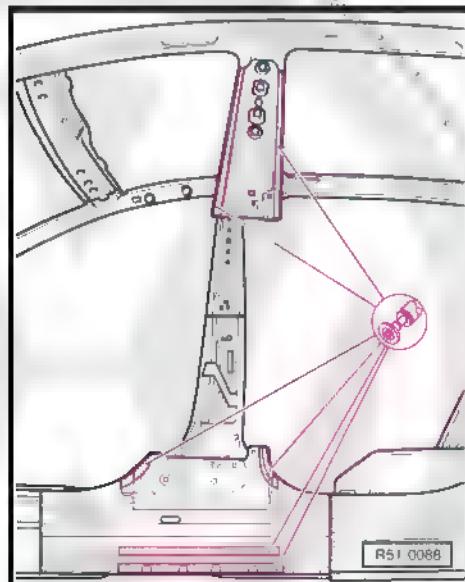
Note

Observe the replacement part cut



11.2.1 Part replacement

- Sand connection surfaces until exposing the bare metal.
- Clean the connection areas by making them free of dust and grease.





11.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 169](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

11.3.1 Replacement part preparation

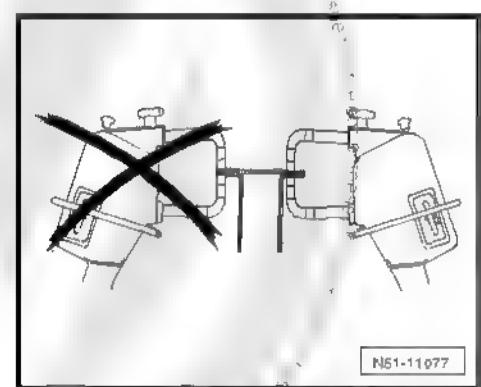
- ◆ Internal B-pillar
- ◆ External B-pillar
- Cut the replacement part following the cuts established on the body.
- Make Ø 8 mm holes for SG continuous seam.
- Apply assembly adhesive - DA 001 730 A1- on the hinge region.

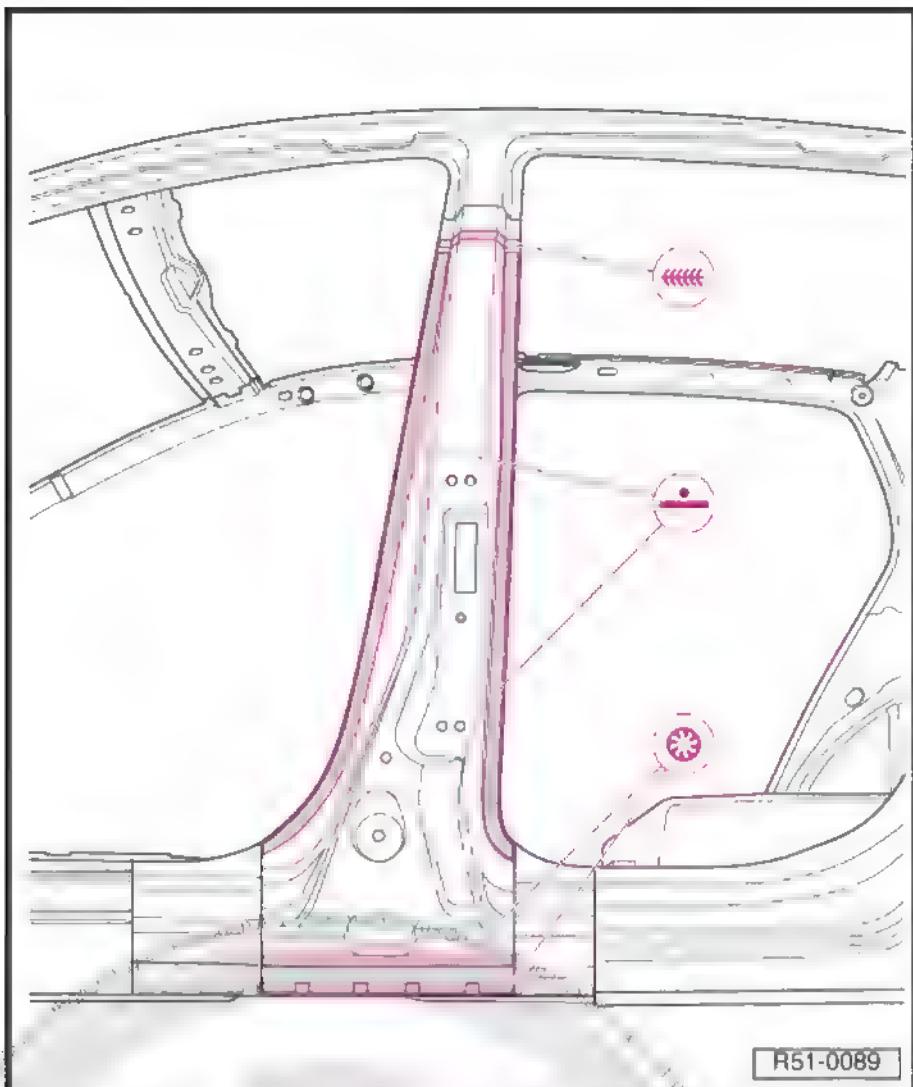
11.3.2 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.





- Adjust and fasten the inner part of B pillar with the vehicle on its wheels or on the alignment workbench.
- Check the body dimensions (door clearances).
- Weld internal section of B-pillar sides with RP - spot seam (one row).
- Weld upper section with SG - continuous seam.
- Weld lower section with SG - hole fulfilment seam.



RO 51 45 55 00

12 Lower longitudinal member (2 doors - external section) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

12.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

12.2 Remove



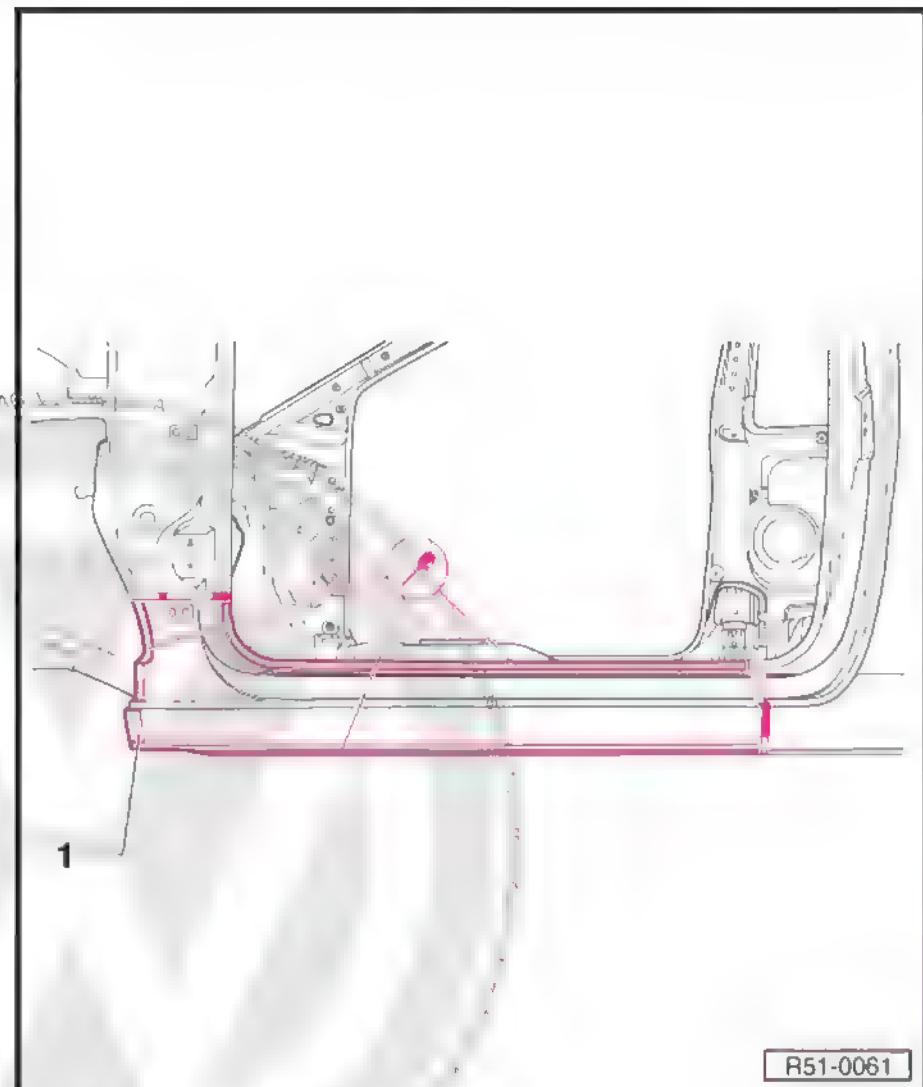
Note

- ◆ Foam residues shall be scraped as much as possible before starting tasks.
- ◆ Only carry out separation cuts using a pneumatic saw - VAG 1523A- .
- ◆ Observe the replacement part cut.

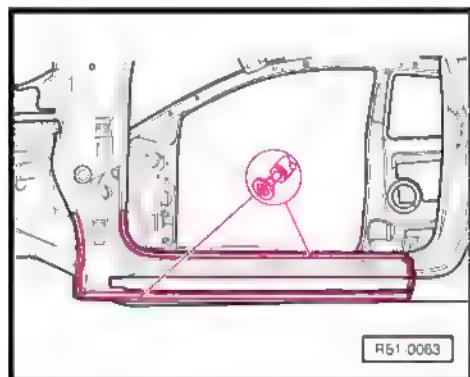


1 - Stuck area

- Carry out the cut on the lower longitudinal member according to the damage
- Undo plate connections.



- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.





12.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 173](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

12.3.1 Prepare the new part

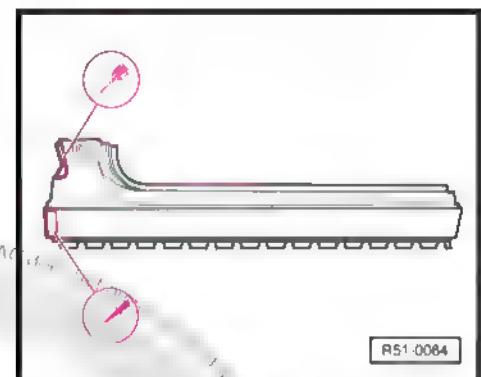
Replacement part

- ◆ Lower longitudinal member partial part
- ◆ Foam part/support
- ◆ 2K body adhesive - D 180 003 M2-
 - Transfer longitudinal member cut and cut.
 - Make holes for SG - continuous seam, 8 mm.
 - Apply adhesive on the sticking area. 2 beads with Ø 3.5 mm.



Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.



12.3.2 Foam part/support

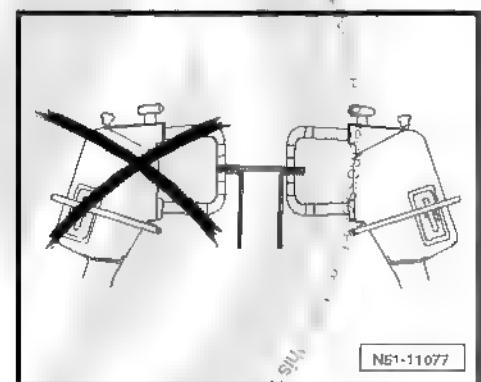
Follow the repair instructions .

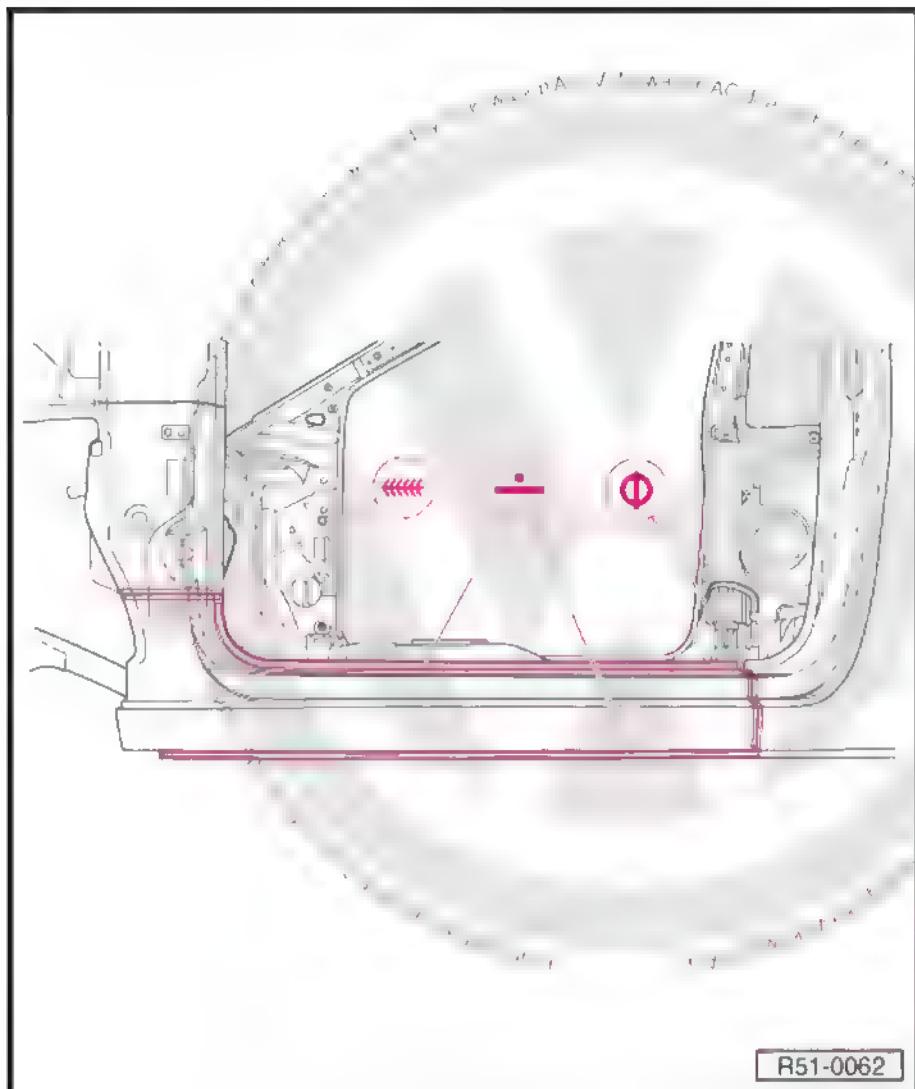
12.3.3 Welding



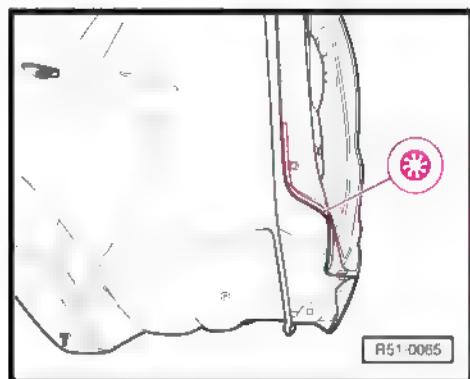
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition
 - Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
 - Place the material itself in the cut between the lower longitudinal member and the side panel.
 - Check adjustment with the complementary parts.





- Butt weld A-pillar cut, SG - continuous seam.
- Weld lower longitudinal member cut with side panel, SG - backstitch seam.
- Re-establish original connection, RP - spot seam (one row).
- Re-establish other connections with A-pillar, SG - hole fulfilment seam.





RO 51 49 55 60

13 Lower longitudinal member reinforcement (2 doors) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

13.1 Tools

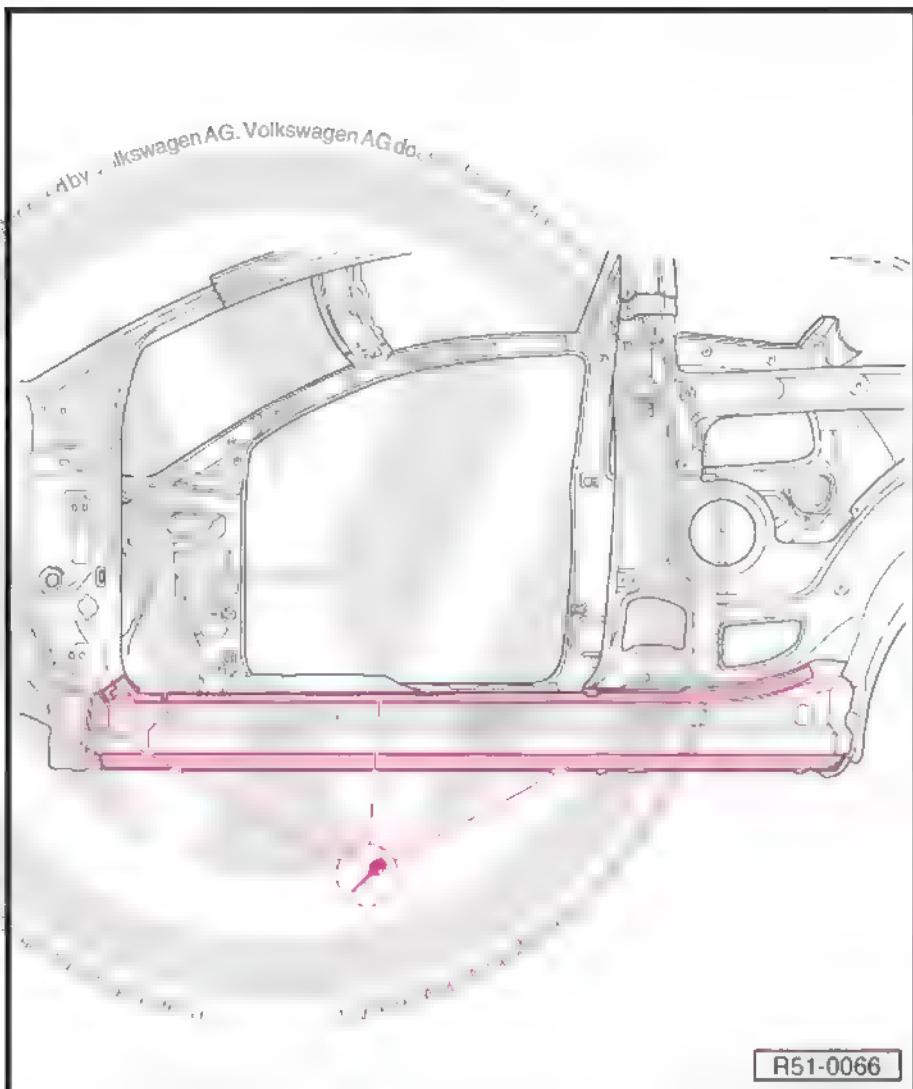


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

13.2 Remove

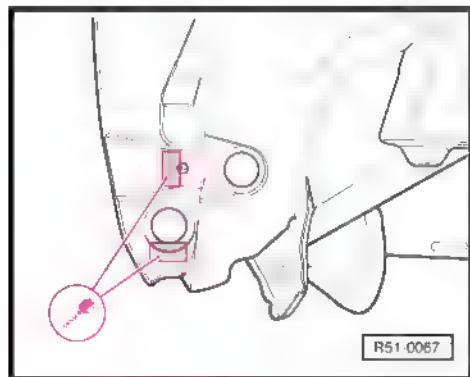
- Lower longitudinal member on the external section, A-pillar on the external section, side panel, and internal B-pillar section are removed.



- Undo plate connections.
- Undo connections on the side of the wheel arch side with rear wheel arch.
- Remove plate residues.



Foam residues shall be scraped as much as possible before sanding tasks.





13.3 Install



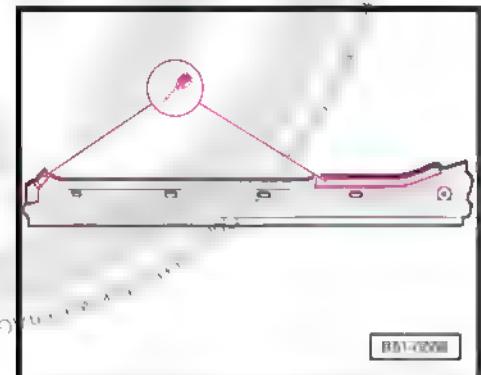
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 177](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

13.3.1 Prepare the new part

Replacement part

- ◆ Lower longitudinal member reinforcement
- ◆ Foam part/support
- Make holes for SG - continuous seam, 8 mm.



13.3.2 Foam part/support

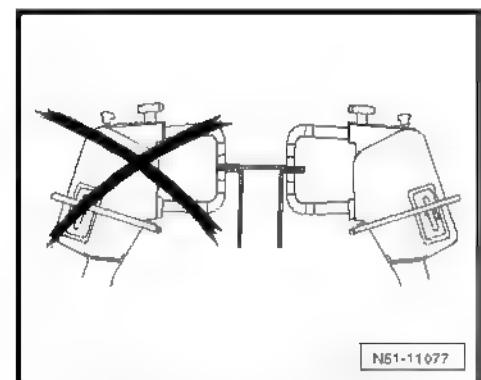
Follow the repair instructions .

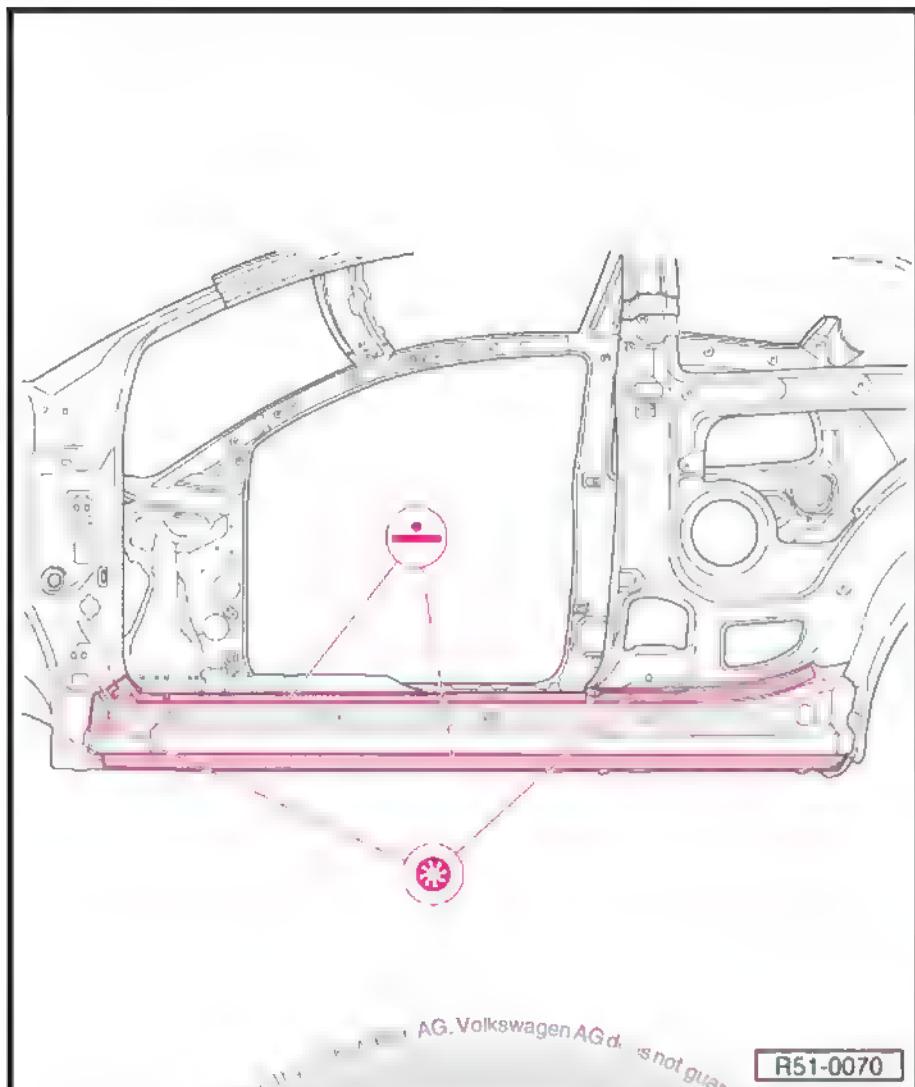
13.3.3 Welding



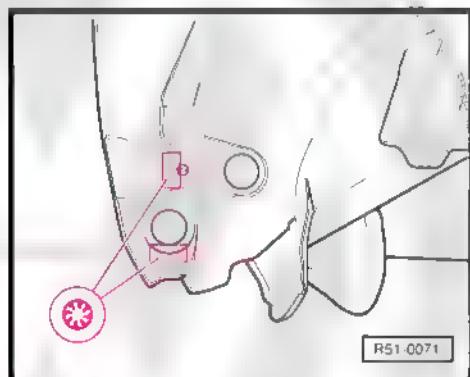
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with B-pillar.





- Weld the new part, RP - spot seam (one row) and SG - hole fulfilment seam.
- Re-establish other connections with wheel arch, SG - hole fulfilment seam.





RO 51 45 55 12

14 Lower longitudinal member (4 doors - external section) - replace



WARNING

Observe safety instructions!

Safety instructions ➤ General notes; Body repairs, Body assembly works; Safety-related notes.

14.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ➤ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ➤ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

14.2 Remove



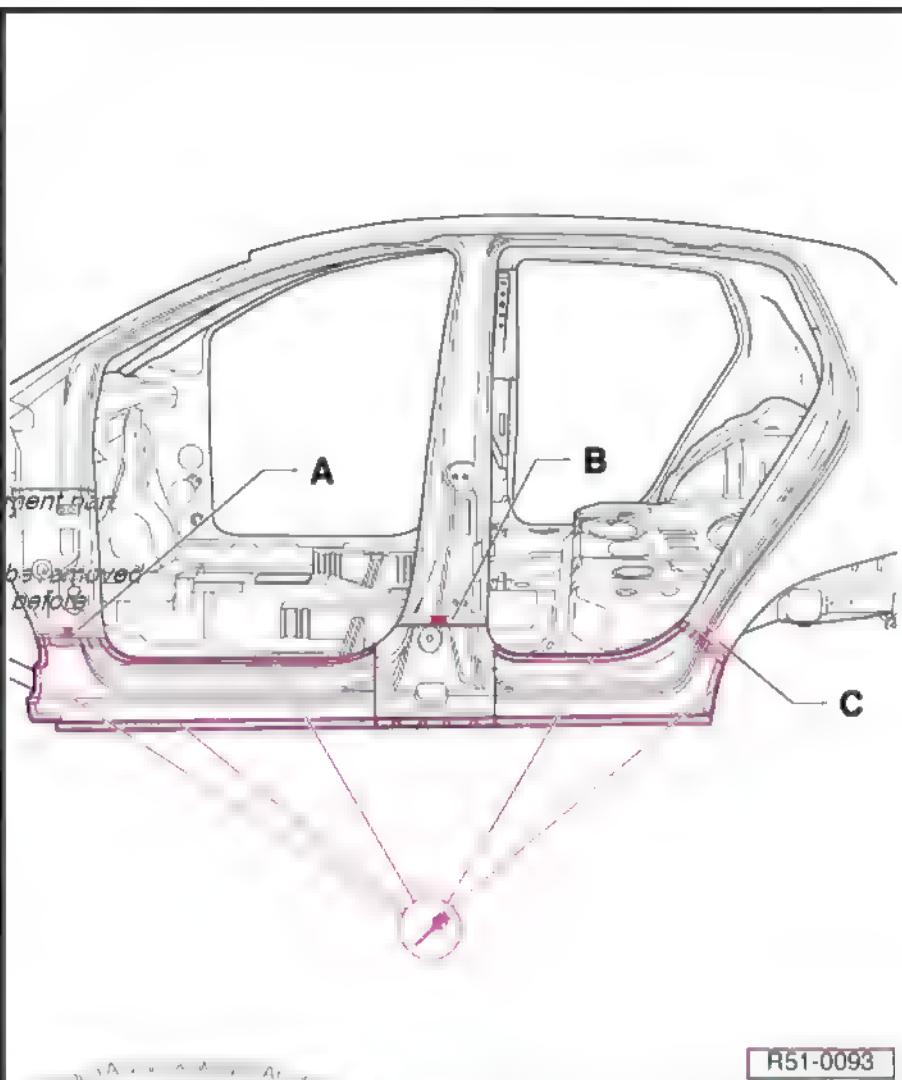
1 - B-pillar cutting line for re-placement

- ◆ Cut the A pillar plate on line -A-.
- ◆ Cut the B pillar plate on line -B- .
- ◆ Cut the pillar C plate on line -C- .
- ◆ Always pay attention to the damage level.
- ◆ Undo plate connections.

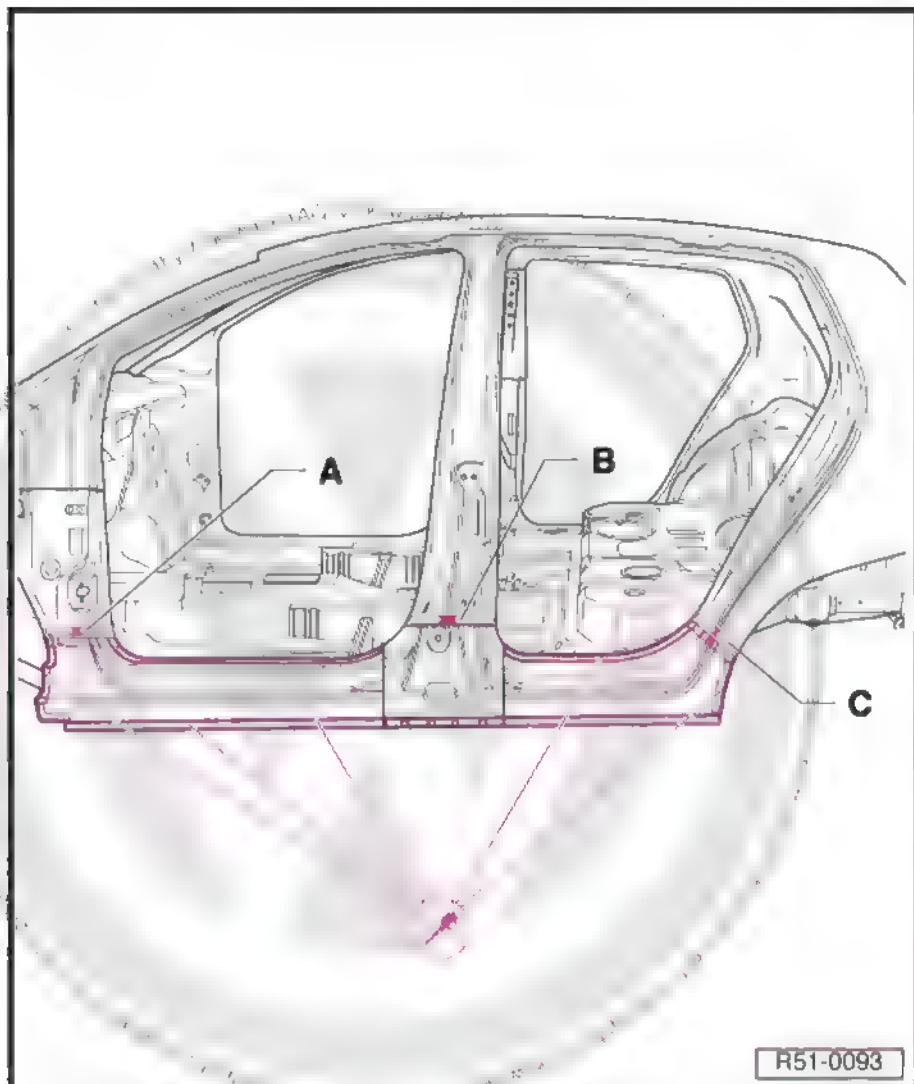


Note

- ◆ *Observe the replacement part cut.*
- ◆ *Foam residues shall be removed as much as possible before sanding tasks.*



R51-0093



14.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 181](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

14.3.1 Replacement part preparation

- ◆ Internal B-pillar
- ◆ External B-pillar
- ◆ External side member

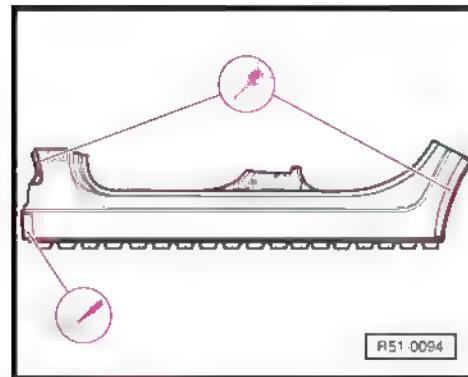


- Transfer cut to the new part and cut
- Make Ø 8 mm holes for SG - continuous seam
- Apply assembly adhesive - DA 001 730 A1- on the gluing area, with 2 3.5-mm diameter beads.



Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

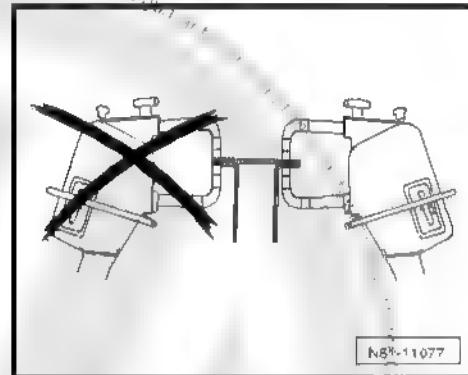


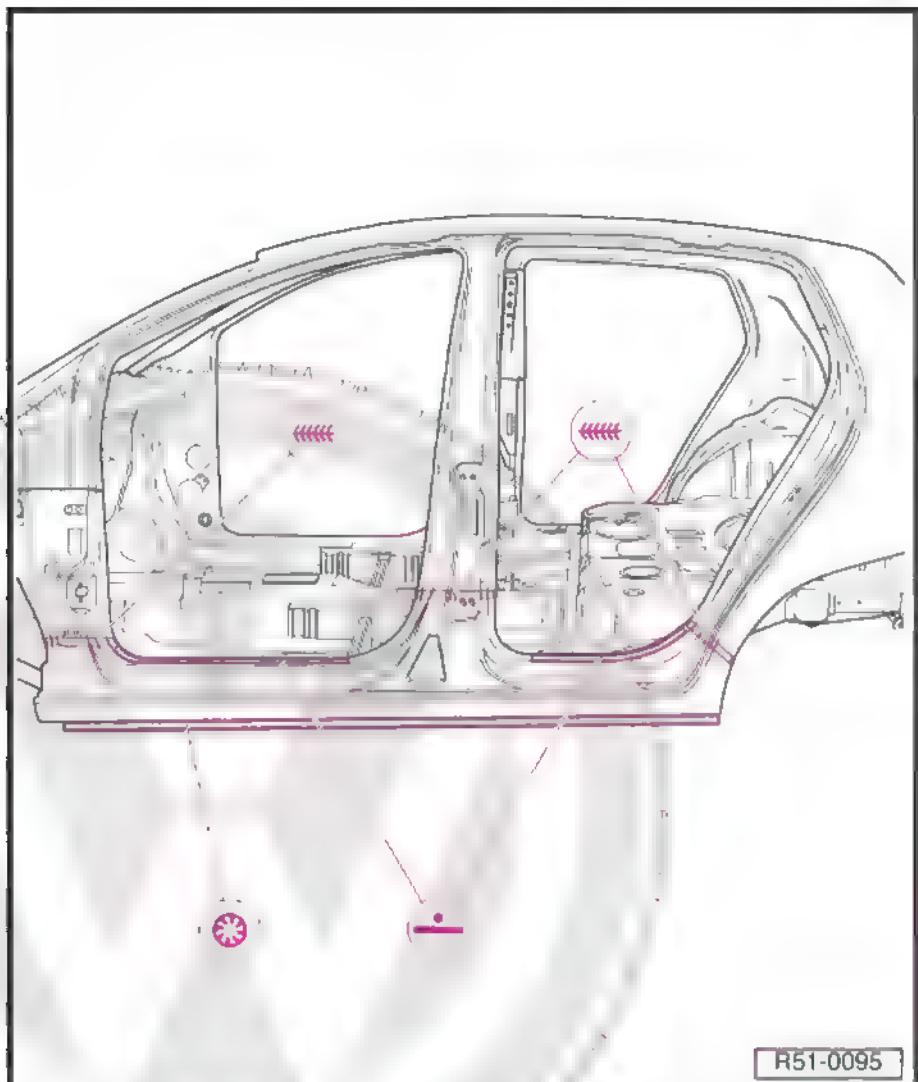
14.3.2 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*





- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with the complementary parts.
- Weld lower longitudinal member cut with side panel with SG continuous weld.
- Weld in A-pillar area with SG - continuous seam.
- Weld lower longitudinal member in upper area with RP - spot seam (one row).
- Weld lower longitudinal member in the lower area with SG - hole fulfilment seam.



RO 51 73 55 50

15 Front floor - partial part - replace



DANGER!

Follow the safety instructions!

⇒ General Information, Body Repairs, General Body Repairs ;
Safety instructions

15.1 Tools



Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.*

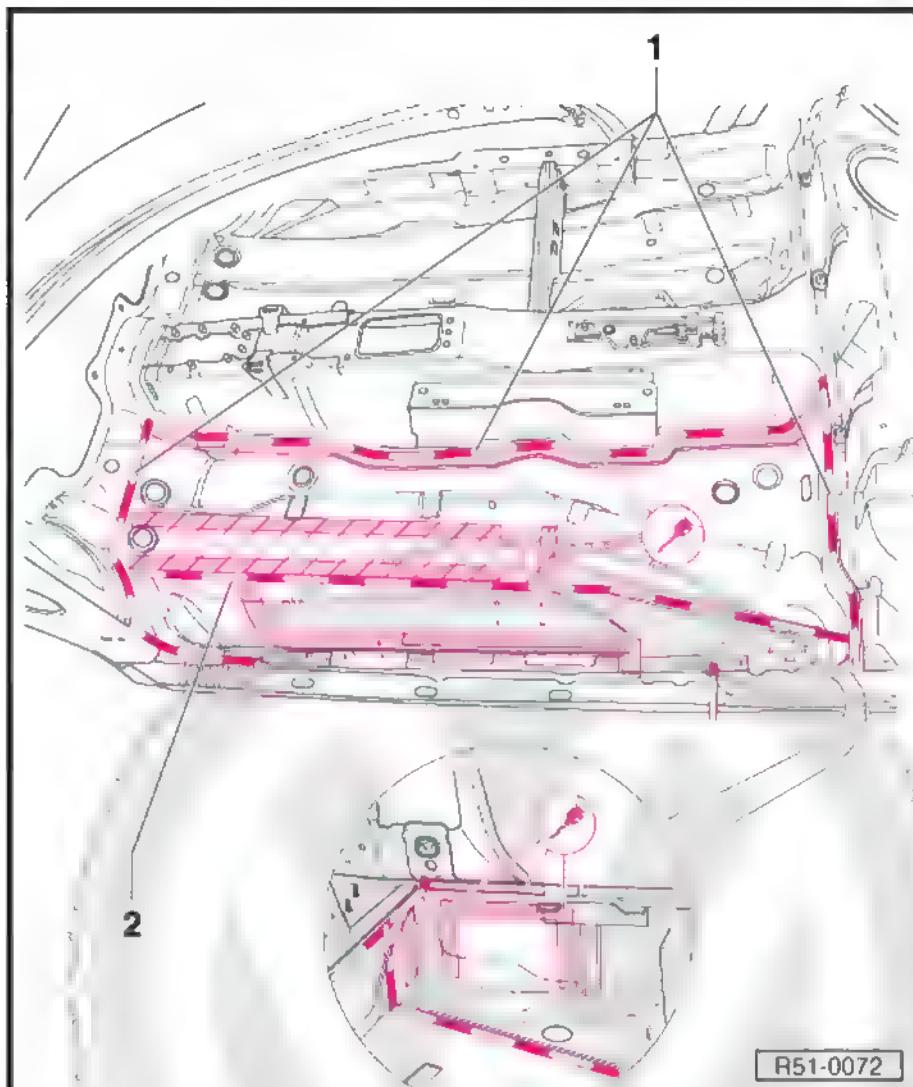
15.2 Remove

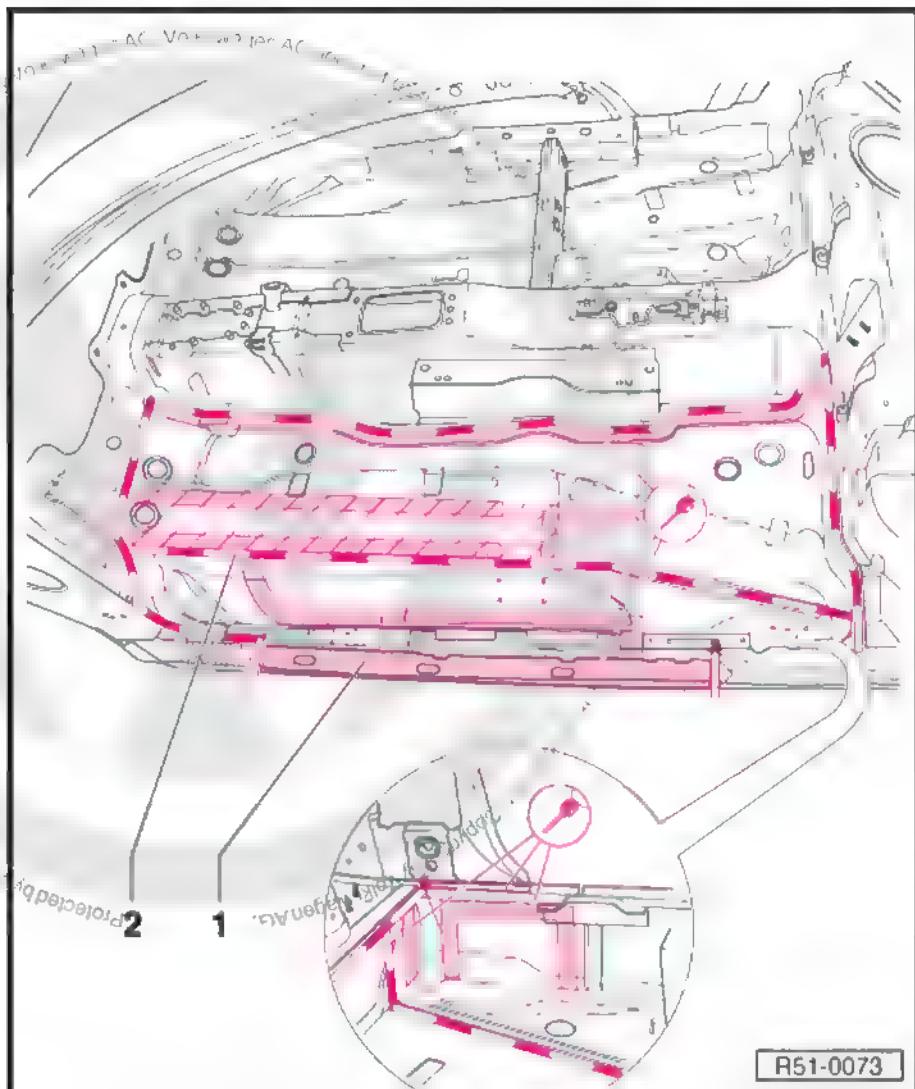


1 - Complete replacement separation line

2 - Partial replacement separation line

- Cut according to damage.
- Undo the original connection to the rear lower longitudinal member reinforcement and the rear cross member -magnifying glass-.





Note

- ◆ Upon floor plate replacement, it makes sense to replace also the connection plate -1- with the lower longitudinal member.
- ◆ Do not carry out any cuts in the central tunnel area.
- ◆ The seat cross member and the guide rail support can only be replaced complete.
- ◆ In the hatched area of the front longitudinal member, drill from below.

Partial renewal

Perform displaced overlap welding -2- on both sides of the cut,
SG - continuous seam and SG - seam (discontinuous).



15.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 186](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

15.3.1 Prepare the new part

Replacement part

- ◆ Floor plate
- ◆ Seat cross member
- ◆ Support for seat guide
- ◆ Connection plate
- Transfer cut to the new part and cut.

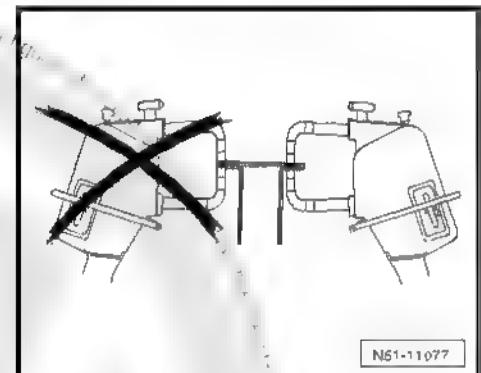
Consider extra 10 mm of material for overlapping.

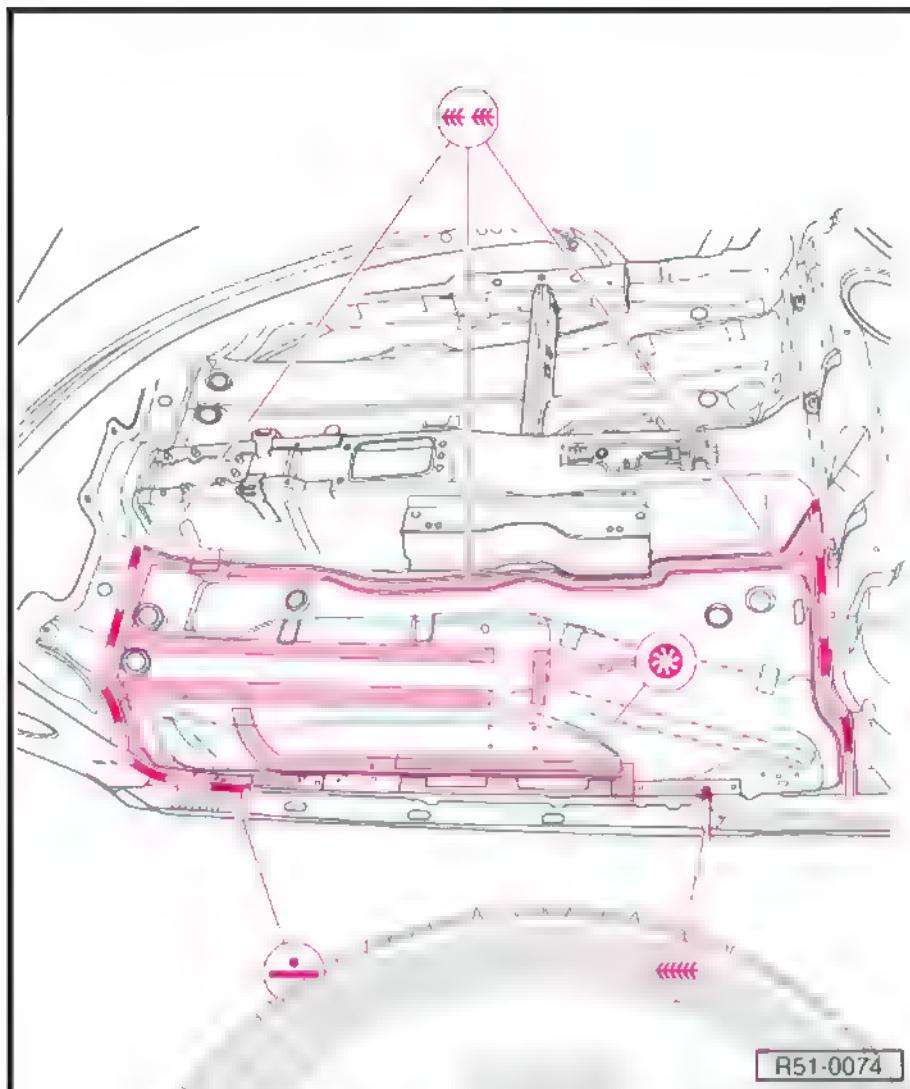
15.3.2 Welding



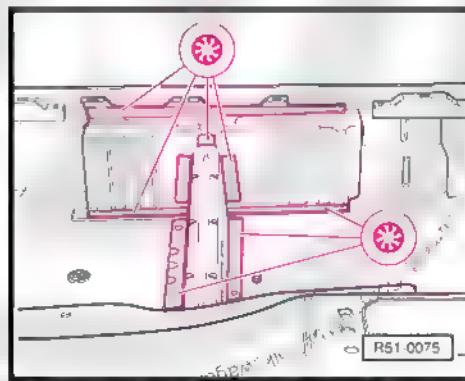
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.



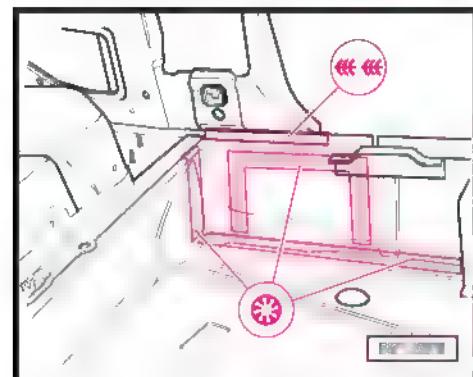


- Perform displaced overlap welding on both sides of the separation cuts, SG - continuous seam and SG - seam (discontinuous).
- Weld floor plate, SG - hole fulfilment seam and RP - spot seam (one row).
- Align and fasten the seat cross member.
- Weld seat cross member, SG - hole fulfilment seam.
- Weld the seat guide rail support, SG - hole fulfilment seam.
- Re-establish the original connection with the reinforcement of the rear section of the lower longitudinal member, SG - hole fulfilment seam.





- Weld rear longitudinal member with floor plate, SG - continuous seam (from below) and SG - hole fulfilment seam and SG - continuous seam from inside





RO 51 49 55 60

16 Lower longitudinal member reinforcement (4 doors) - replace



WARNING

Observe safety instructions!

Safety instructions => General notes; Body repairs, Body assembly works; Safety-related notes.

16.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal => Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal => Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

16.2 Remove

- ◆ Lower longitudinal member, external section, removed.



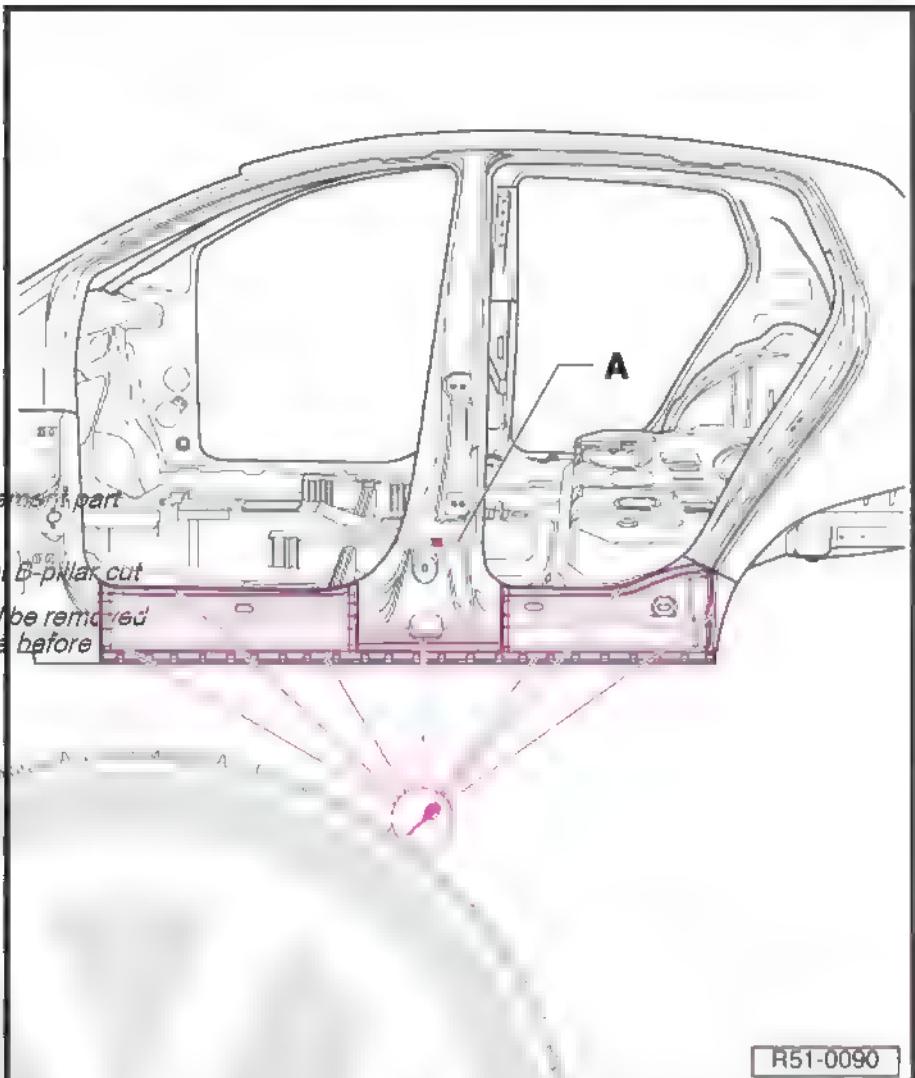
1 - Stuck area

- ◆ Cut lower longitudinal member.
- ◆ Cut the B pillar plate on line -A-.
- ◆ Undo original connections.
- ◆ Remove plate residues.
- ◆ Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.



Note

- ◆ *Observe the replacement part cut*
- ◆ *Observe the internal B-pillar cut*
- ◆ *Foam residues shall be removed as much as possible before sanding tasks.*



16.3 Install



Note

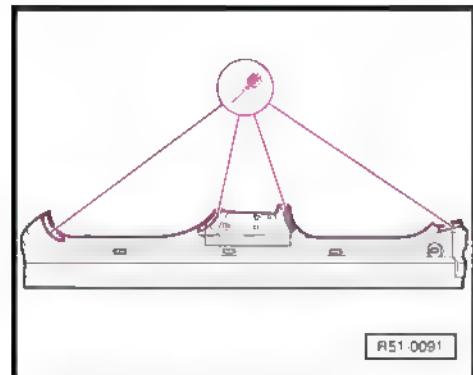
- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 192.*
- ◆ *At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding*

16.3.1 Prepare the new part

- ◆ Partial internal B-pillar
- ◆ Lower longitudinal member reinforcement



- Transfer cut to the new part and cut
- Make Ø 8 mm holes for SG - continuous seam

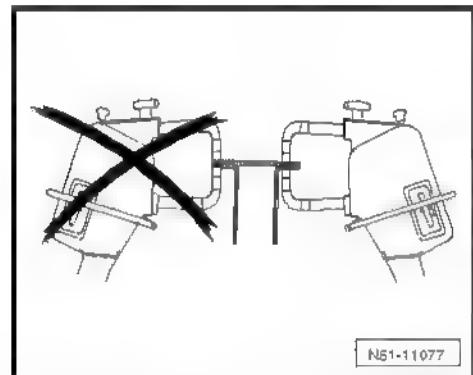


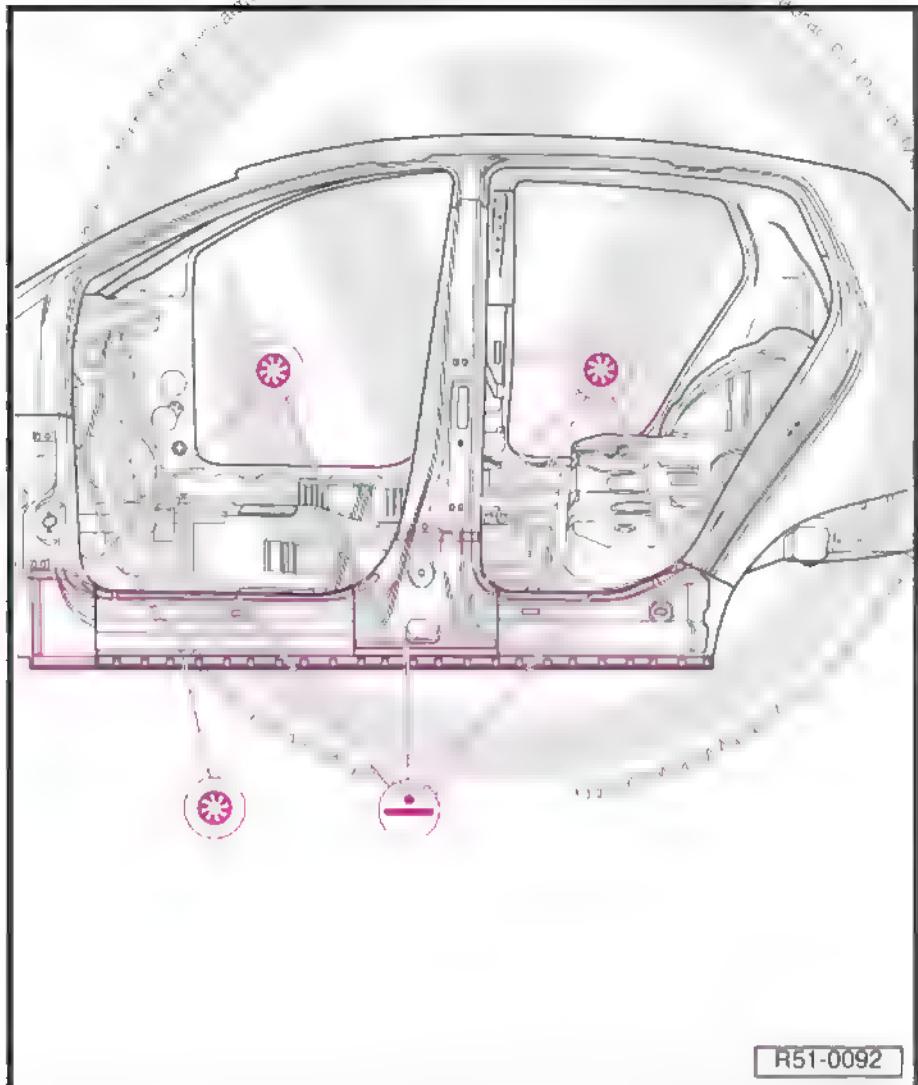
16.3.2 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*





- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with the complementary parts.
- Weld lower longitudinal member cut with side panel with SG - hole fulfilment seam.
- Weld in A-pillar area with SG - hole fulfilment seam.
- Weld the internal B-pillar region, partially
- Weld lower longitudinal member in upper area with RP - spot seam (one row).
- Weld lower longitudinal member in the lower area with SG - hole fulfilment seam.



53 – Body - rear

RO 53 05 55 00

1 Back panel (2 and 4-door Fox) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ;
Safety Instructions

1.1 Tools

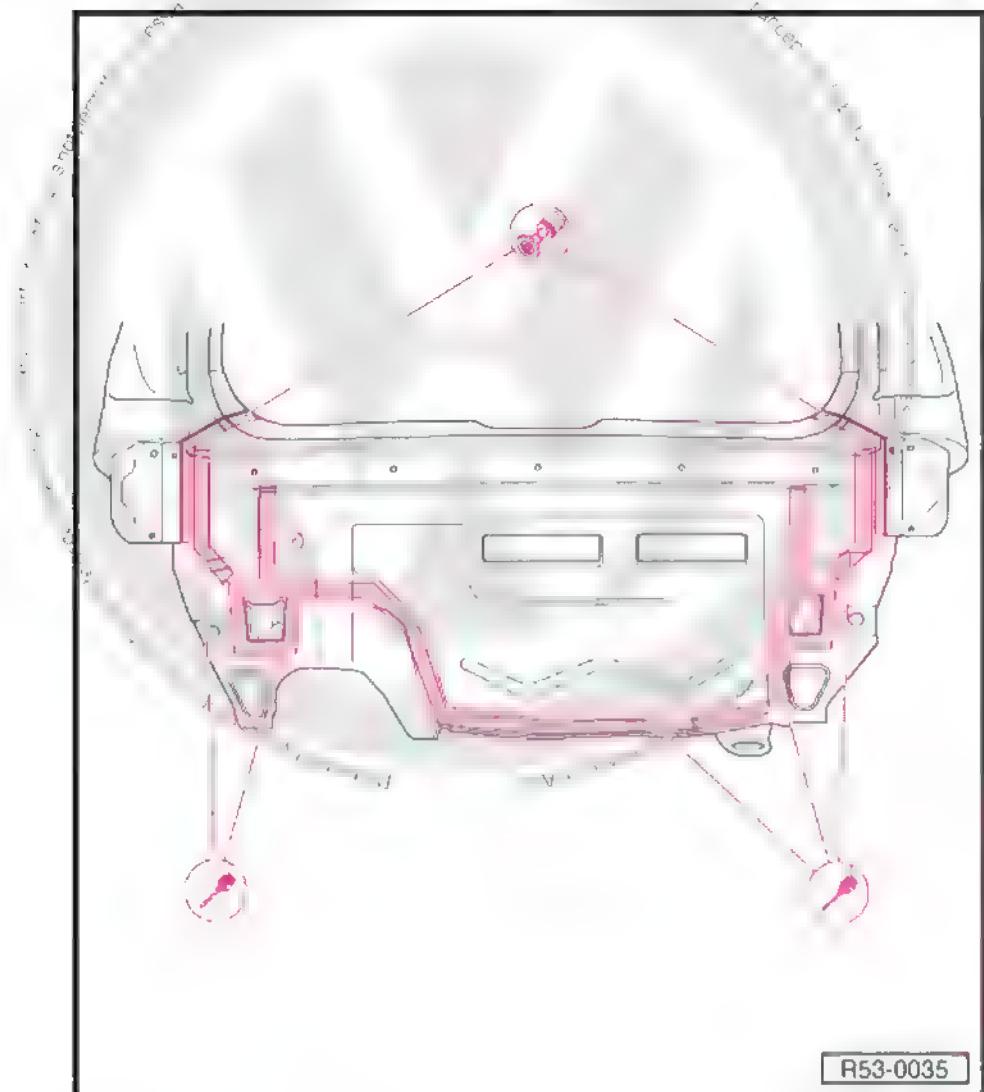


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

1.2 Remove

- Rear cross member removed



- Cut rear panel with rear cross member (internal section).
- Undo plate connections.



Note

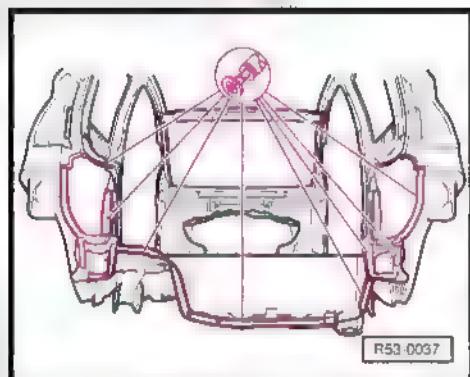
Foam residues shall be scraped as much as possible before sanding tasks.



- In rear panel connections with side panels, plate
-shadowed area- shall be cut and folded outwards so that rear panel can be replaced



- Remove plate residues.



1.3 Install



Note

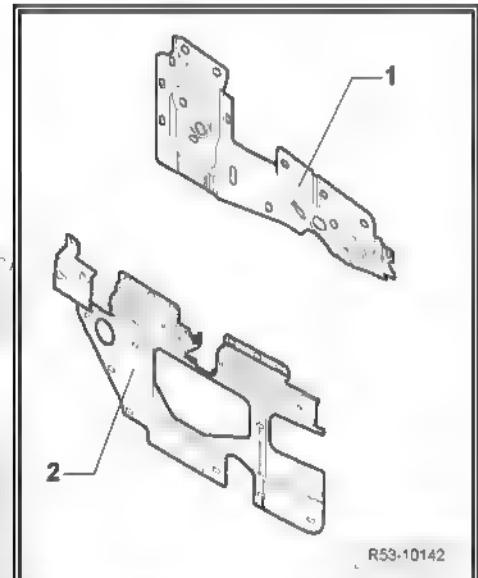
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 196.
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding



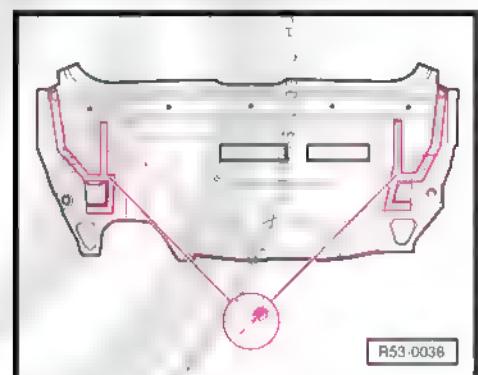
1.3.1 Prepare the new part

Replacement part

- ◆ Back panel
- ◆ Rear cross member
- ◆ Foam part/support
- ◆ Spare wheel support hinge reinforcement -1- (New Crossfox)
- ◆ Spare wheel lock reinforcement -2- (Crossfox and New Crossfox)



- Make holes for SG - continuous seam, Ø 8 mm.



1.3.2 Foam part/support

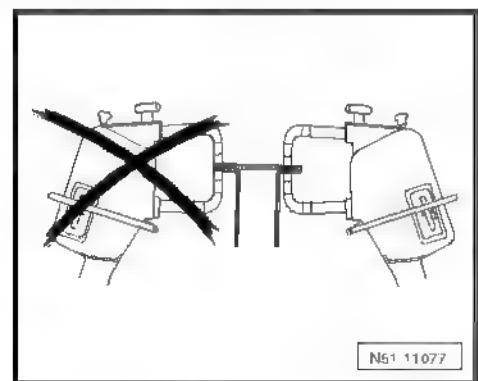
Follow the repair instructions .

1.3.3 Welding



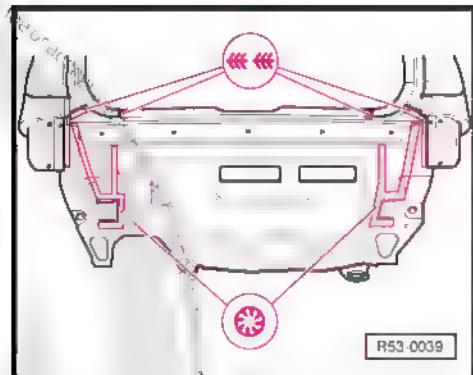
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the rear lid closing operation
- Check adjustment with the complementary parts.

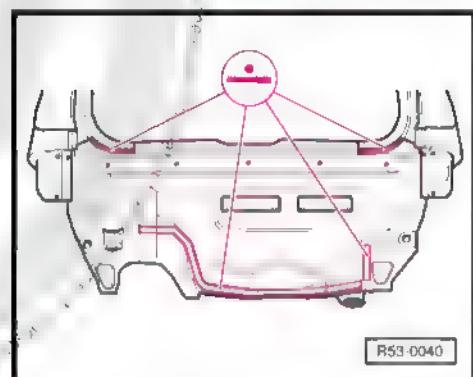


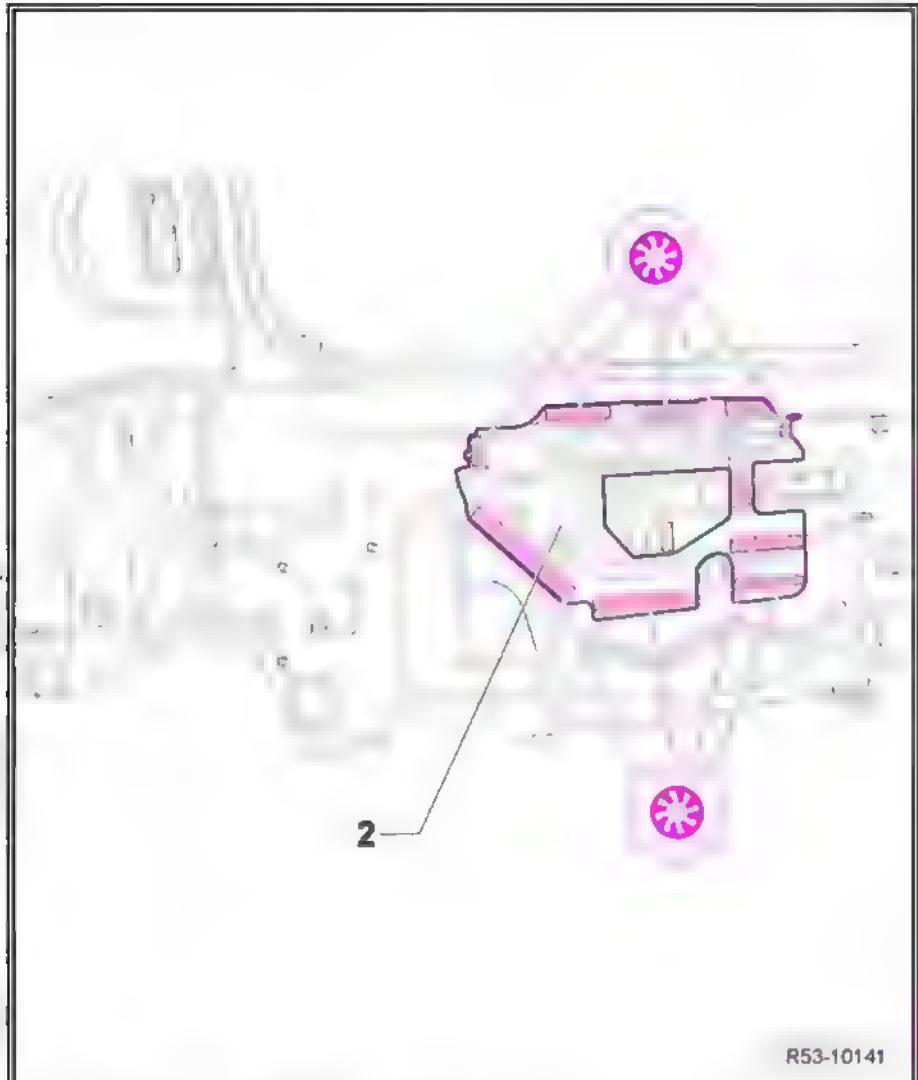


- Weld rear panel, SG - hole fulfilment seam and SG - continuous seam.



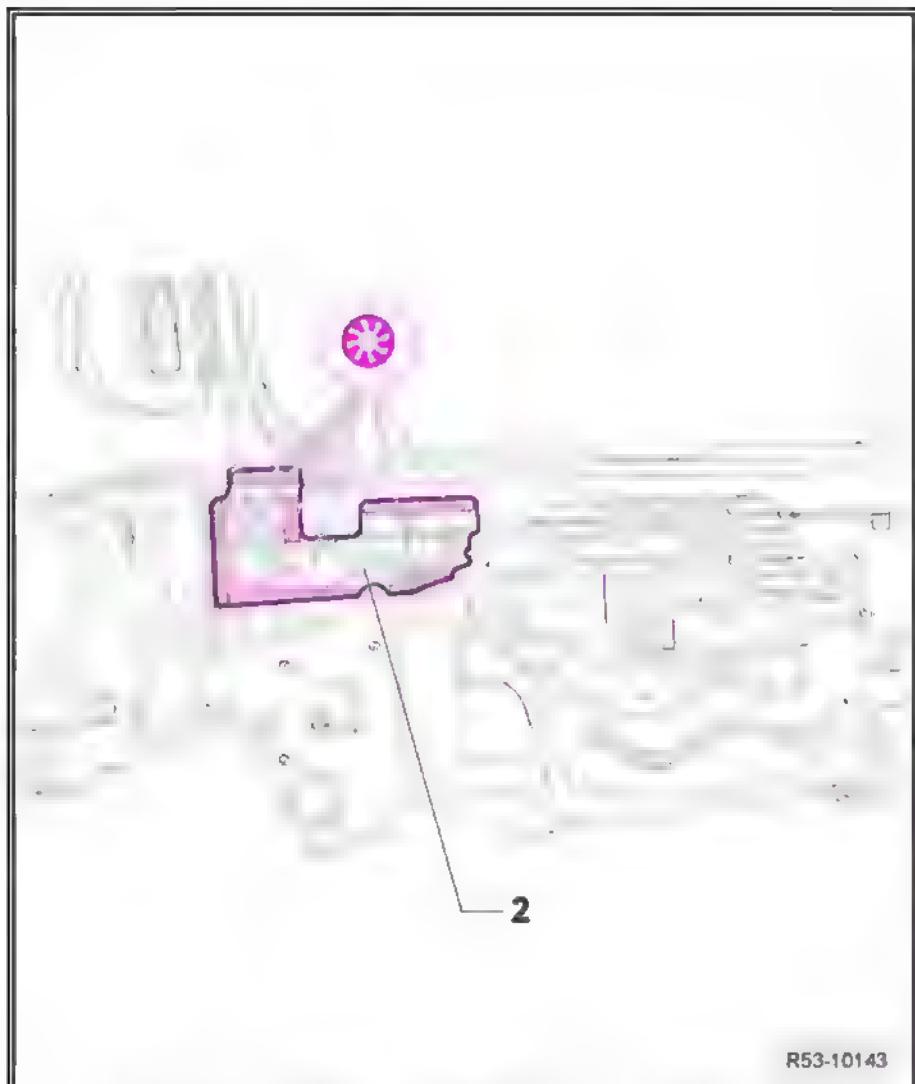
- Re-establish original connection, RP - spot seam (one row).
- Weld the rear cross member [⇒ page 209](#).





R53-10141

- Weld spare wheel lock reinforcement -1- (Crossfox and New Crossfox).



- Weld spare wheel support hinge reinforcement -2- (New Crossfox).



RO 53 05 55 10

2 Back panel (Spacefox) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

2.1 Tools



Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.*

2.2 Remove

- Rear cross member removed



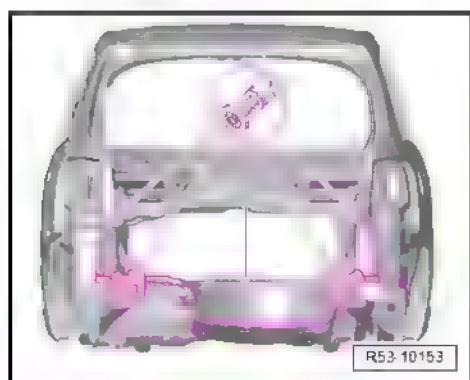
- Cut the back panel entirely with rear cross member (internal section).
- Undo plate connections.



Note

Foam residues shall be scraped as much as possible before sanding tasks.

- Remove plate residues.





2.3 Install



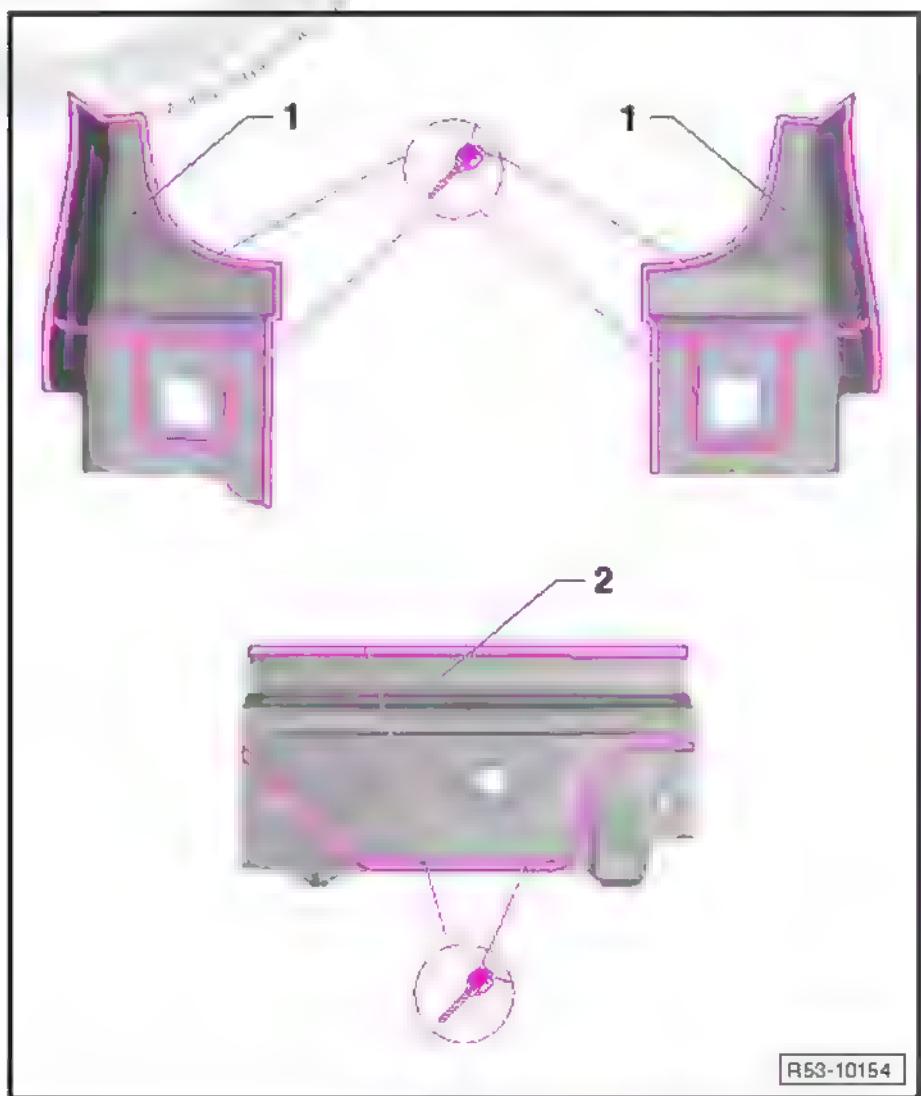
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 203](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs, General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

2.3.1 Prepare the new part

Replacement part

- ◆ Back panel
- ◆ Back panel side
- ◆ Rear cross member



R53-10154



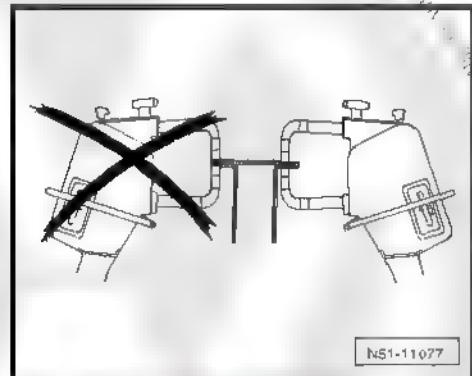
- Make holes for SG - continuous seam, Ø 8 mm.

2.3.2 Welding

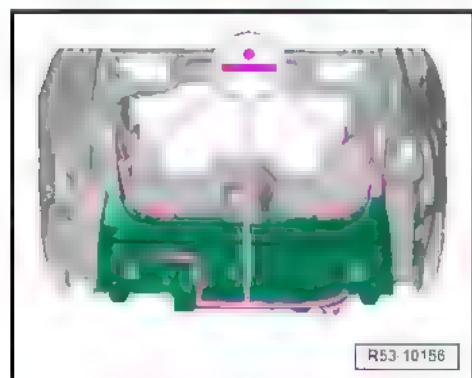


Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the rear lid closing operation.
- Check adjustment with the complementary parts.
- Weld the rear panel, SG - hole fulfilment seam and SG - continuous seam.



- Weld the back panel, RP - spot seam (one row).
- Weld the rear cross member .





RO 53 09 55 00

3 Rear cross member - replace



DANGER!

Follow the safety instructions!

Safety instructions ➤ General Information, Body Repairs, General Body Repairs ; Safety instructions

3.1 Tools



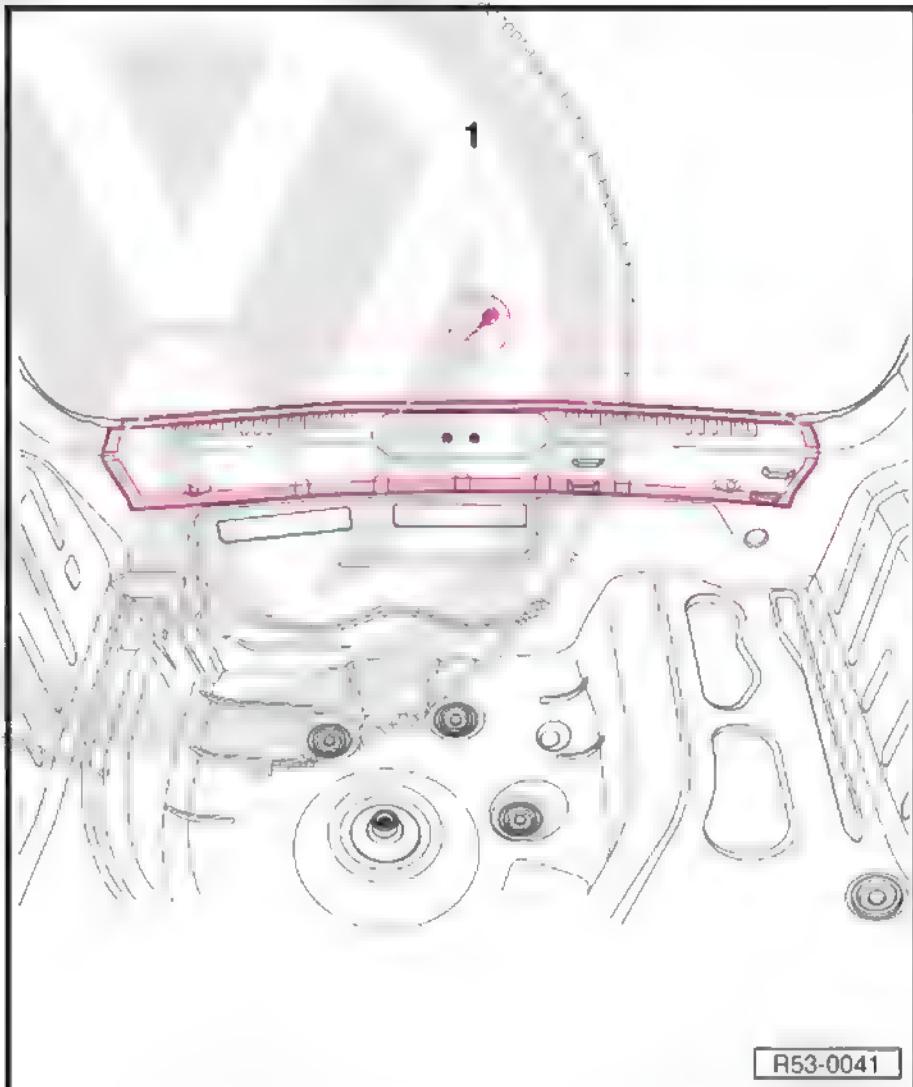
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ➤ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ➤ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

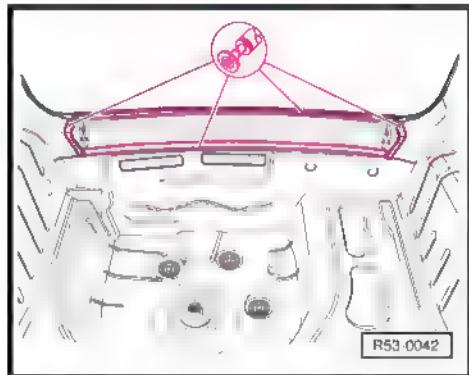
3.2 Remove



1 - Stuck area



- Undo plate connections.
- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.





3.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
[⇒ page 207](#)
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

3.3.1 Prepare the new part

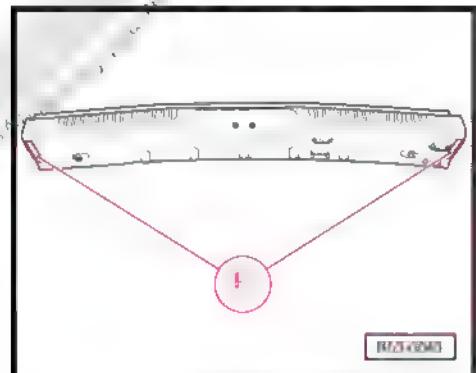
Replacement part

- ◆ Rear cross member
- ◆ 2K body adhesive - D 180 003 M2-
- Drill the new part.
- Apply adhesive on the sticking area. 2 beads with Ø 3.5 mm.



Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

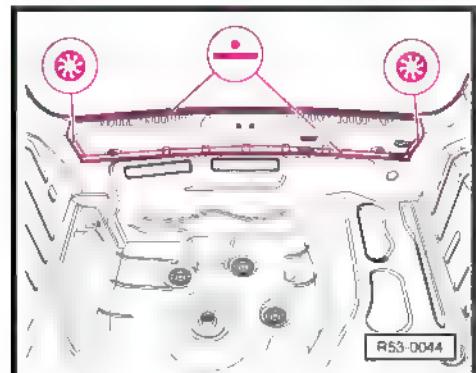
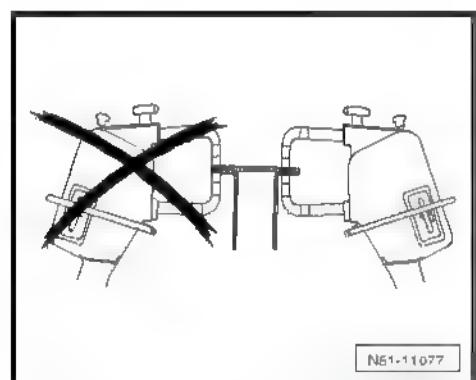


3.3.2 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the rear lid closing operation.
- Weld the new part, SG - hole fulfilment seam.
- Redo original connection, RP - spot seam (one row).





RO 53 09 55 10

4 Rear cross member - replace



DANGER!

Follow the safety instructions!

Safety instructions ⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

4.1 Tools



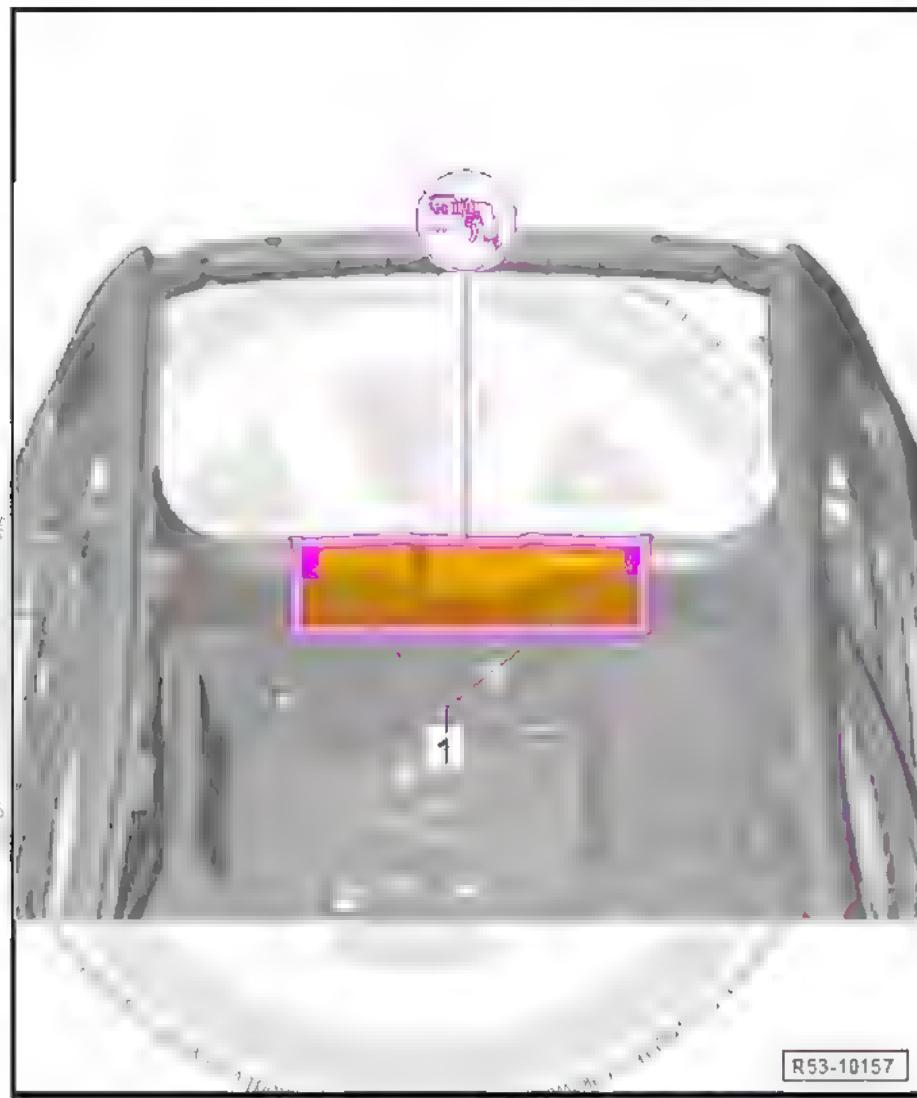
Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.*

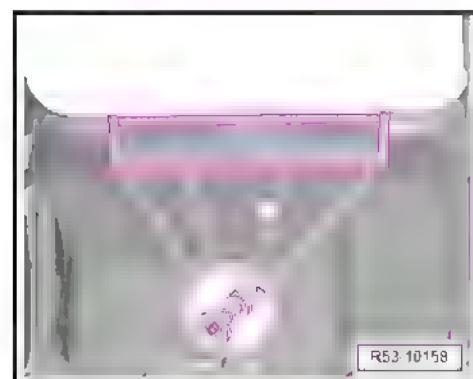
4.2 Remove



1 - Stuck area



- Undo plate connections.
- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.





4.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 210.
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

4.3.1 Prepare the new part

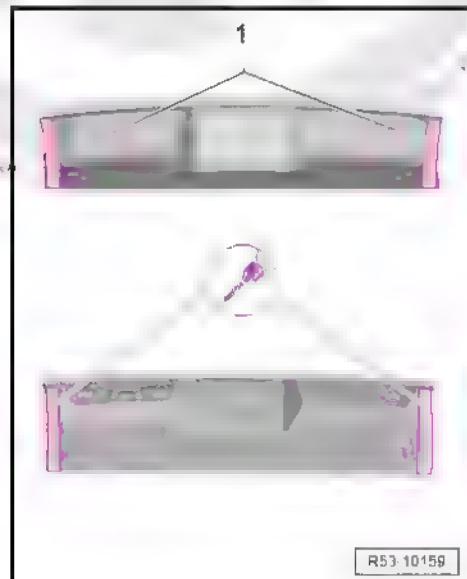
Replacement part

- ◆ Rear cross member
- ◆ 2K body adhesive - D 180 003 M2-
- Drill the new part.
- Apply adhesive on the adhesion area -1-. 2 beads with Ø 3.5 mm.



Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

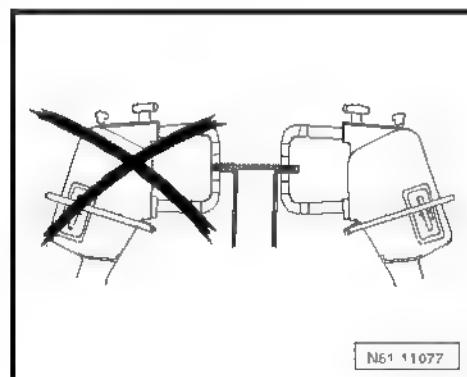


4.3.2 Welding



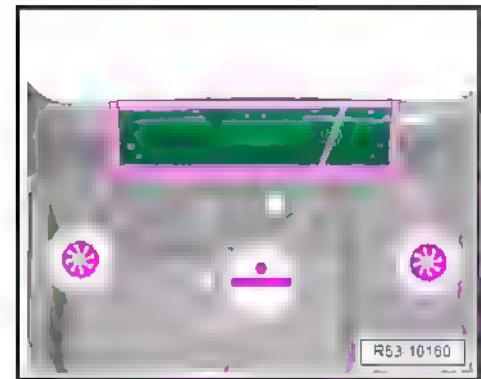
Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.





- Check the rear lid closing operation.
- Weld the new part, SG - hole fulfilment seam.
- Weld the original connection, RP - spot seam (one row).





RO 53 10 55 50

5 Tail light housing - replace



DANGER!

Follow the safety instructions!

⇒ General Information: Body Repairs, General Body Repairs :
Safety instructions

5.1 Tools

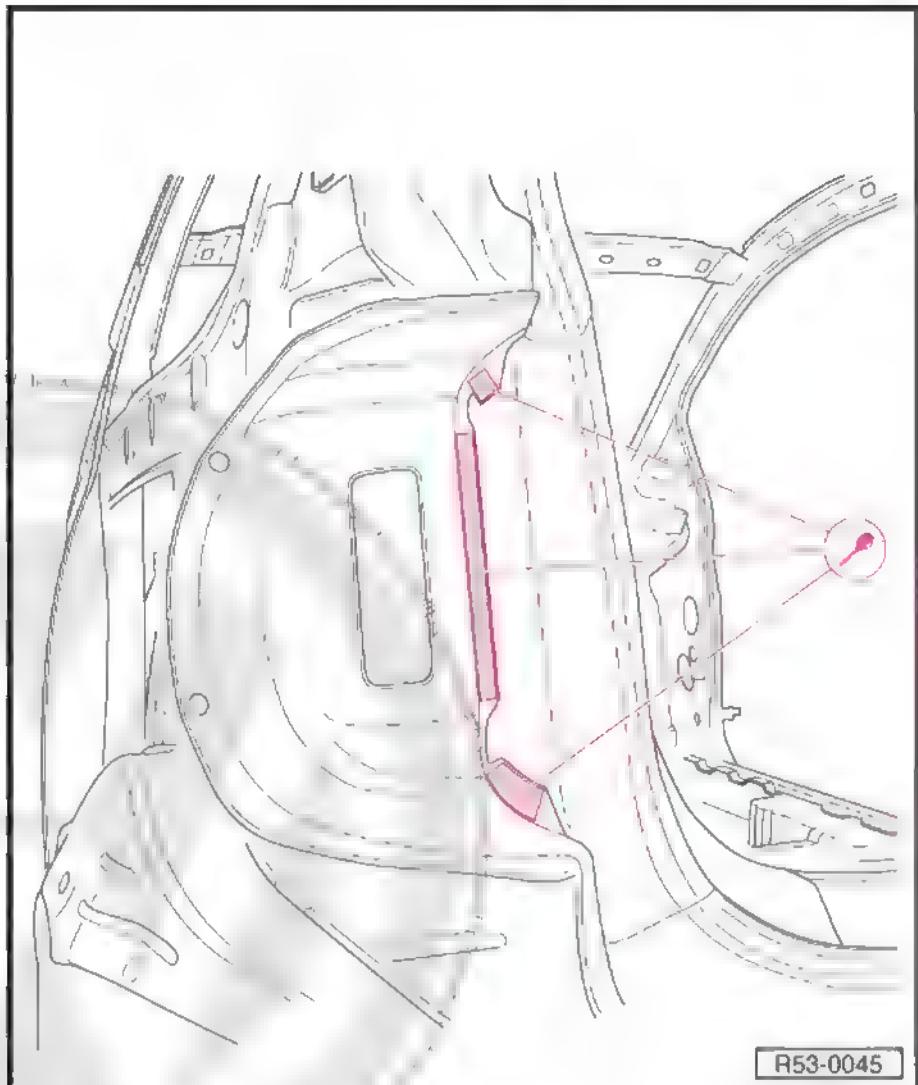


Note

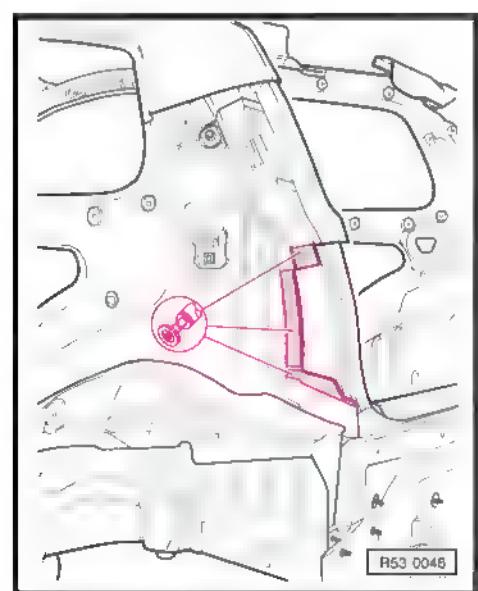
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

5.2 Remove

- Side panel removed



- Undo plate connections.
- Remove plate residues.





5.3 Install



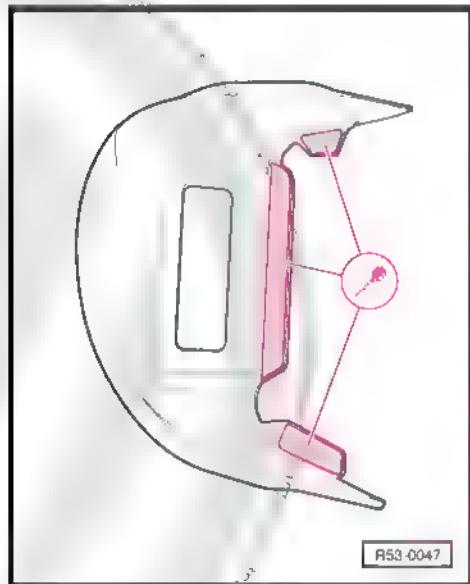
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 214](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

5.3.1 Prepare the new part

Replacement part

- ◆ Tail light housing
- Make holes for SG - continuous seam, Ø 8 mm.



5.3.2 Welding

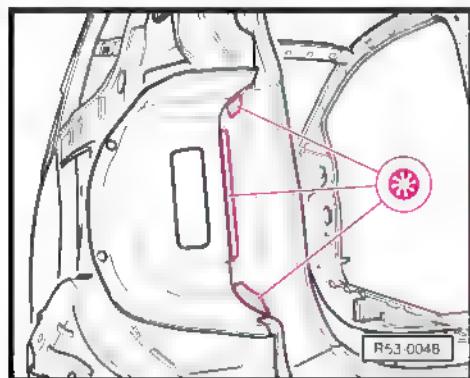
- Adjust and fasten the new part to the side panel.
- Check the adjustment between the rear tail light and the rear lid.
- Weld the new part, SG - hole fulfilment seam.



Note

The other connections are welded along with the side panel welding.

- Weld side panel ⇒ [page 238](#).





RO 53 10 55 51

6 Tail light housing (Spacefox) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

6.1 Tools

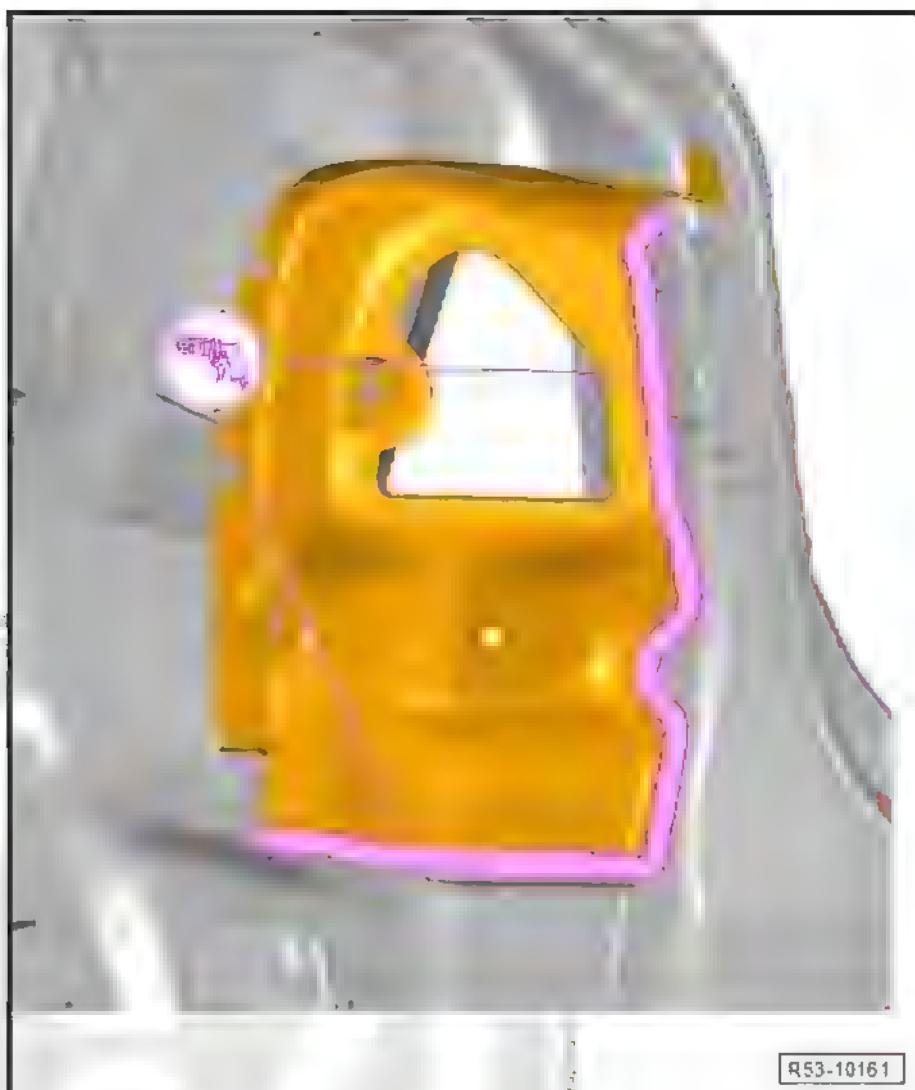


Note

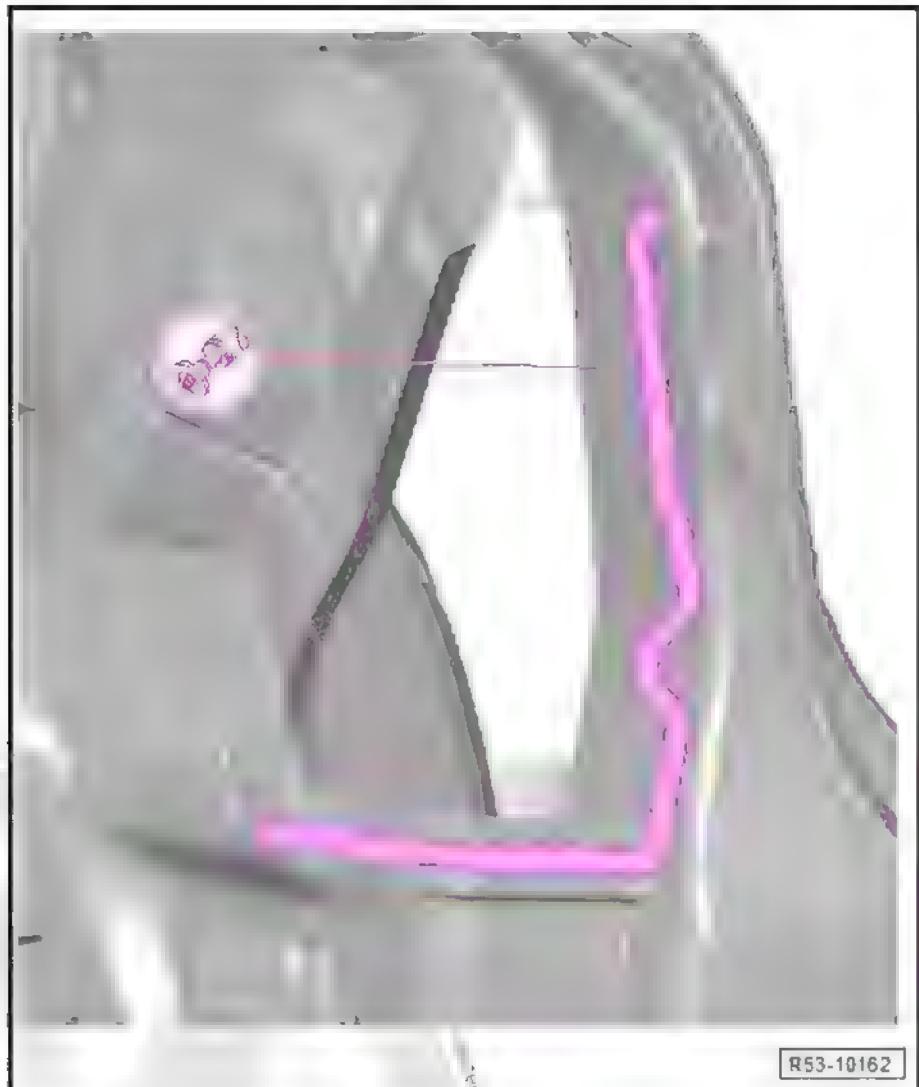
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

6.2 Remove

- Side panel removed



- Undo plate connections.



- Undo plate connections.

6.3 Install

Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
[page 217](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs, General Body Repairs, Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

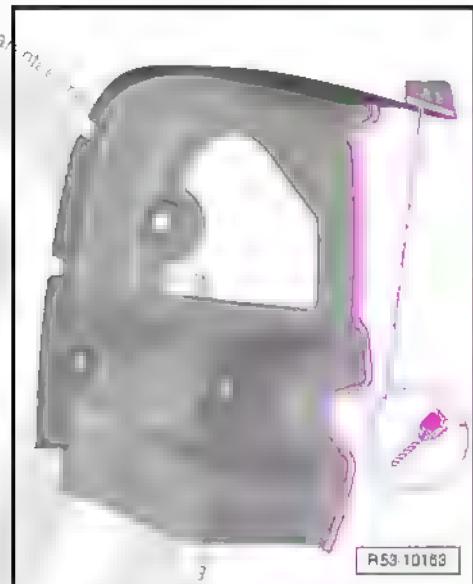
6.3.1 Prepare the new part

Replacement part

- ◆ Tail light housing



- Make holes for SG - continuous seam, Ø 8 mm.



6.3.2 Welding

- Adjust and fasten the new part to the side panel.
- Check the adjustment between the rear tail light and the rear lid.



R53-10164

- Weld the new part, SG - hole fulfilment seam.

Protected
Copyright © Volkswagen AG
All rights reserved.
This document is the property of Volkswagen AG.
It is intended for internal use only.
Any reproduction, even in part, is prohibited.



RO 53 22 55 00

7 Tow hook - replace



DANGER!

Follow the safety instructions!

⇒ General Information, Body Repairs, General Body Repairs ;
Safety instructions

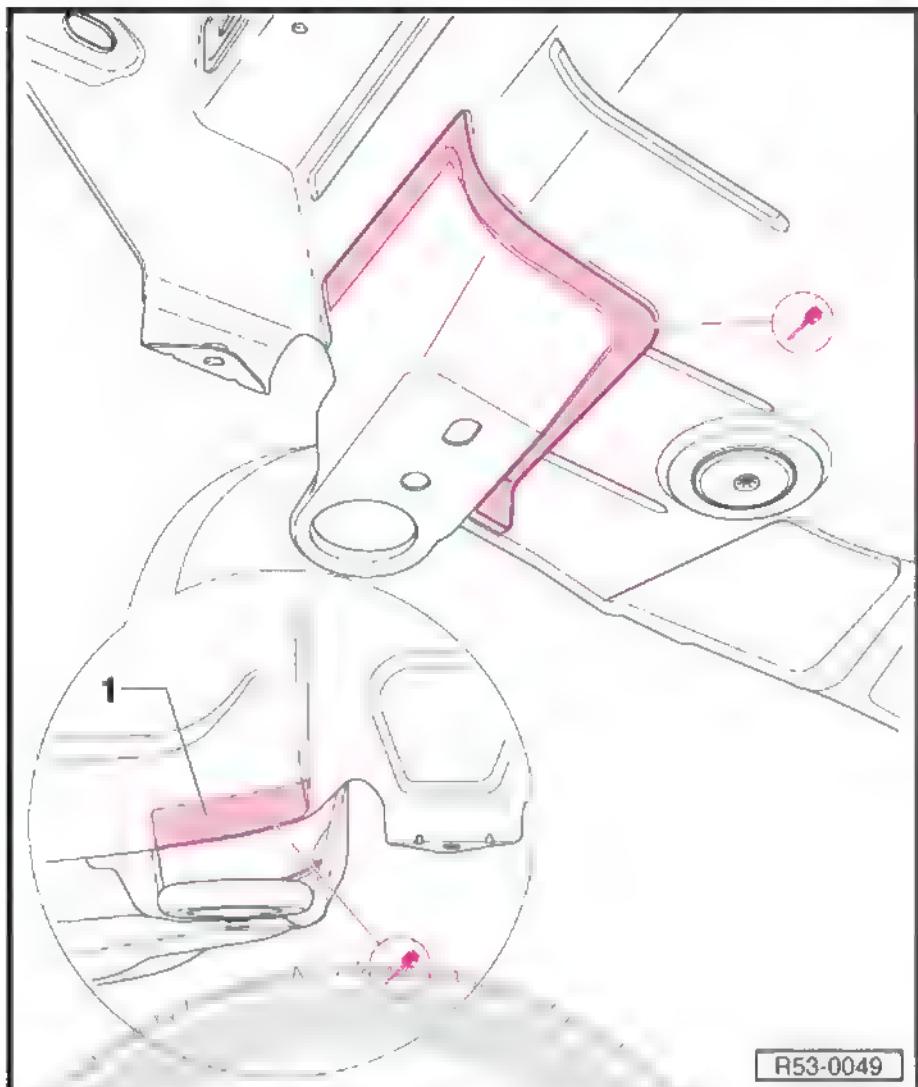
7.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

7.2 Remove



- Undo plate connections.



Note

The original connection must be drilled from below.

- Drill spot welded connections -1- with rear panel.
- Remove plate residues.

7.3 Install



Note

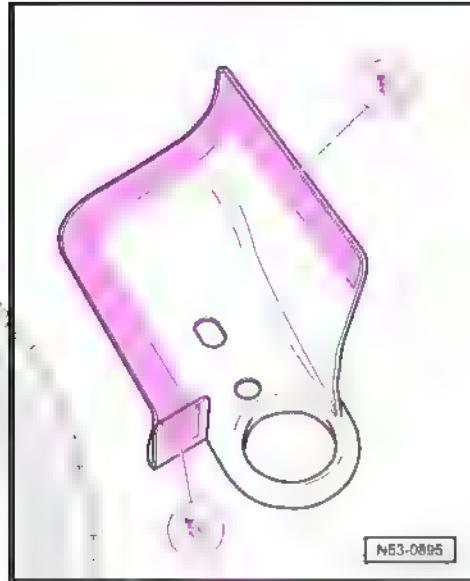
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
→ page 222.
- ◆ At smoothed areas, apply zinc-based conductive paint → General Information; Body Repairs, General Body Repairs, Anti-corrosive protection measures - Anti-corrosive protection materials before welding



7.3.1 Prepare the new part

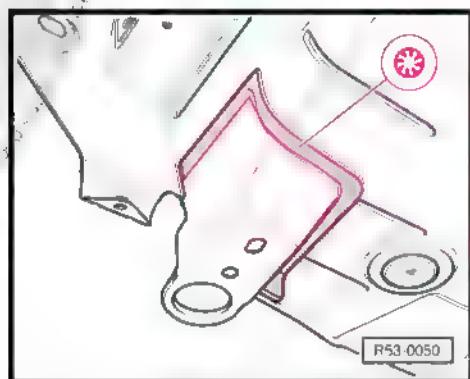
Replacement part

- ◆ tow hook
- Drill the new part.

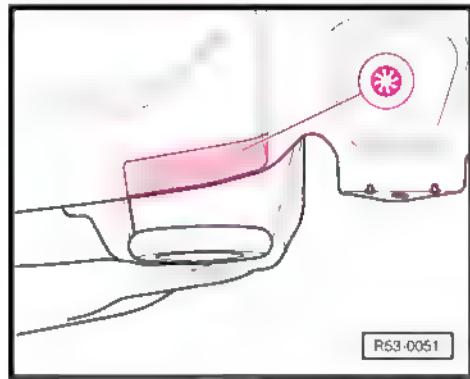


7.3.2 Welding

- Adjust and fasten tow hook.
- Weld tow hook, SG - hole fulfilment seam.



- Re-establish other connections with end plate, SG - hole fulfilment seam.





RO 53 48 55 52

8 Rear longitudinal member (Fox - partial part) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

8.1 Tools



Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal ⇒ Tech Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.*

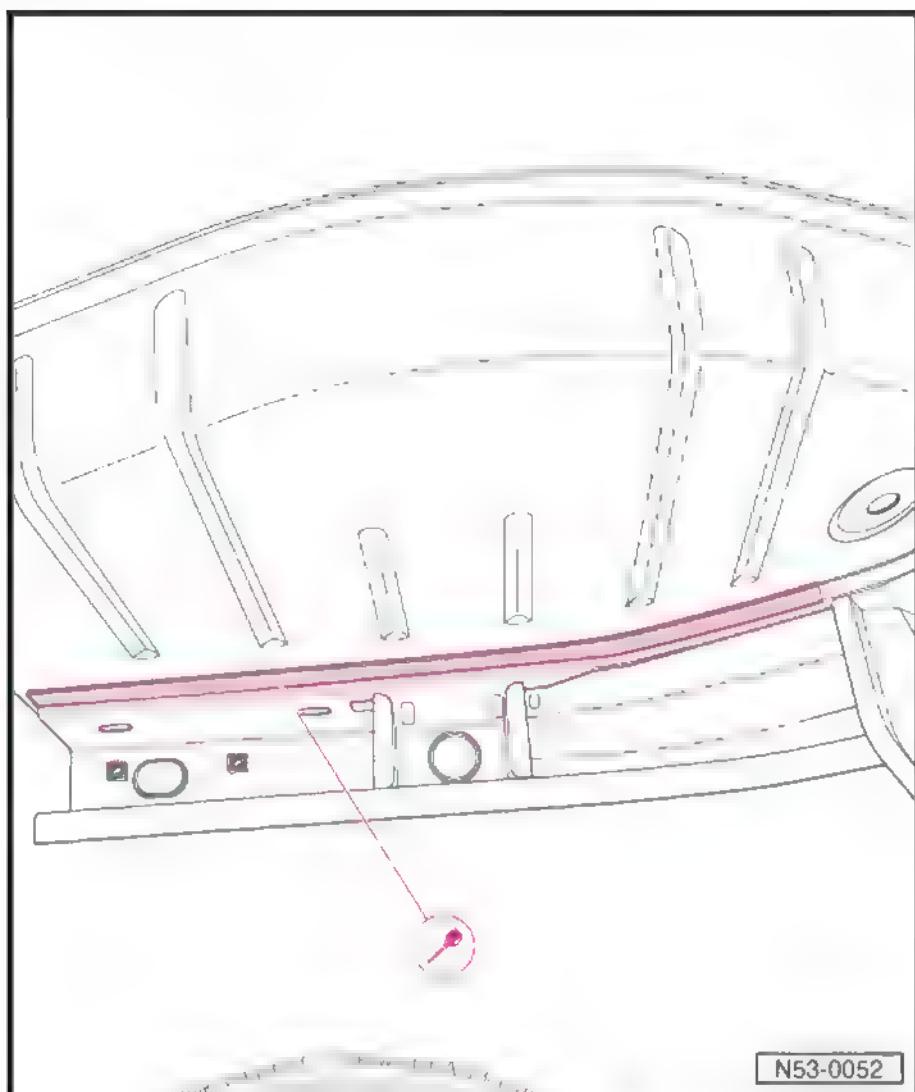
8.2 Remove

- The end plate is separated.
- The spare wheel housing is separated.

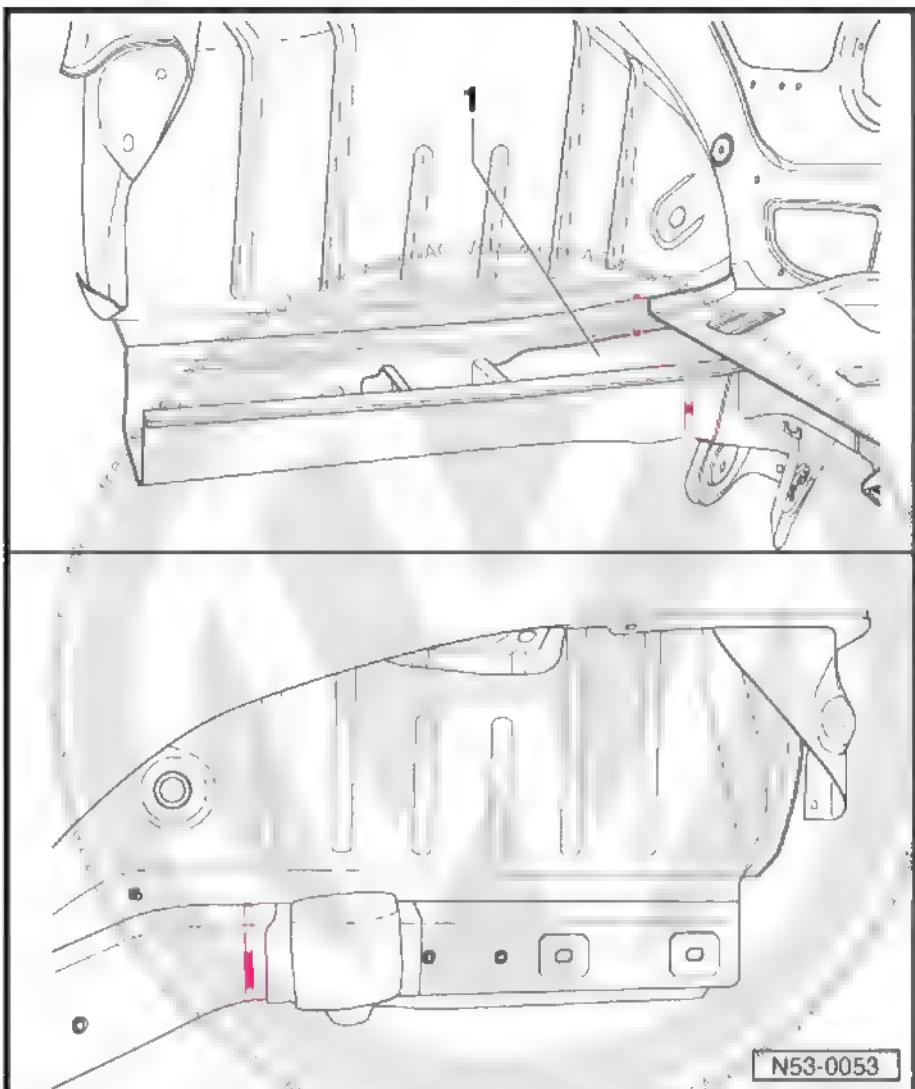


Note

Foam residues shall be removed as much as possible before sanding tasks.



- Undo plate connections with wheel arch.



- Cut as showed. Do not damage internal reinforcements -1-.
- Remove plate residues.

8.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 225](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

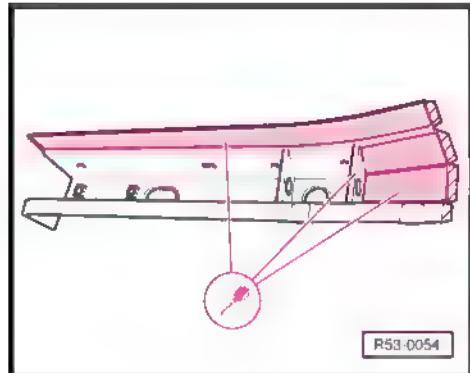
8.3.1 Prepare the new part

Replacement part

- ◆ Partial part longitudinal member
- ◆ Foam part/support



- Transfer cut to the new part and cut. In this case, you must consider an extra 15 mm of material for the overlapping.
- Make holes for SG - continuous seam, 8 mm.

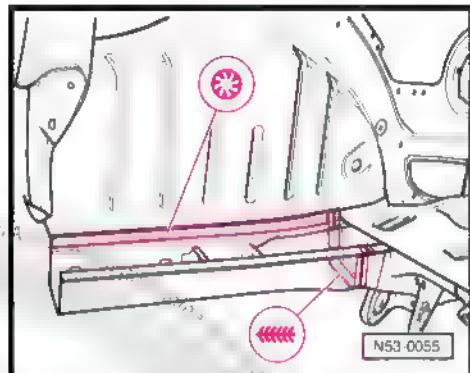


8.3.2 Foam part/support

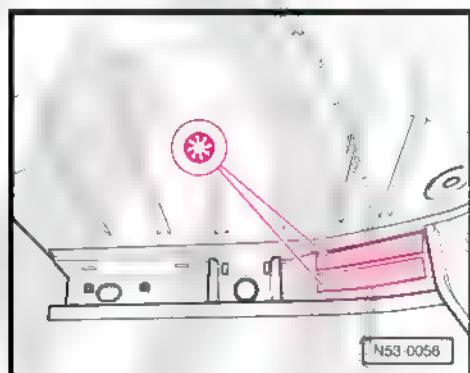
Follow the repair instructions .

8.3.3 Welding

- Adjust and fasten the new part to the spare wheel housing and with the vehicle on the alignment platform.
- Weld longitudinal member, SG - continuous seam and SG - hole fulfilment seam.



- Re-establish other connections with the internal longitudinal member reinforcement, SG - hole fulfilment seam.





RO 53 48 55 53

9 Rear longitudinal member (Spacefox - partial part) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

9.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, Welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

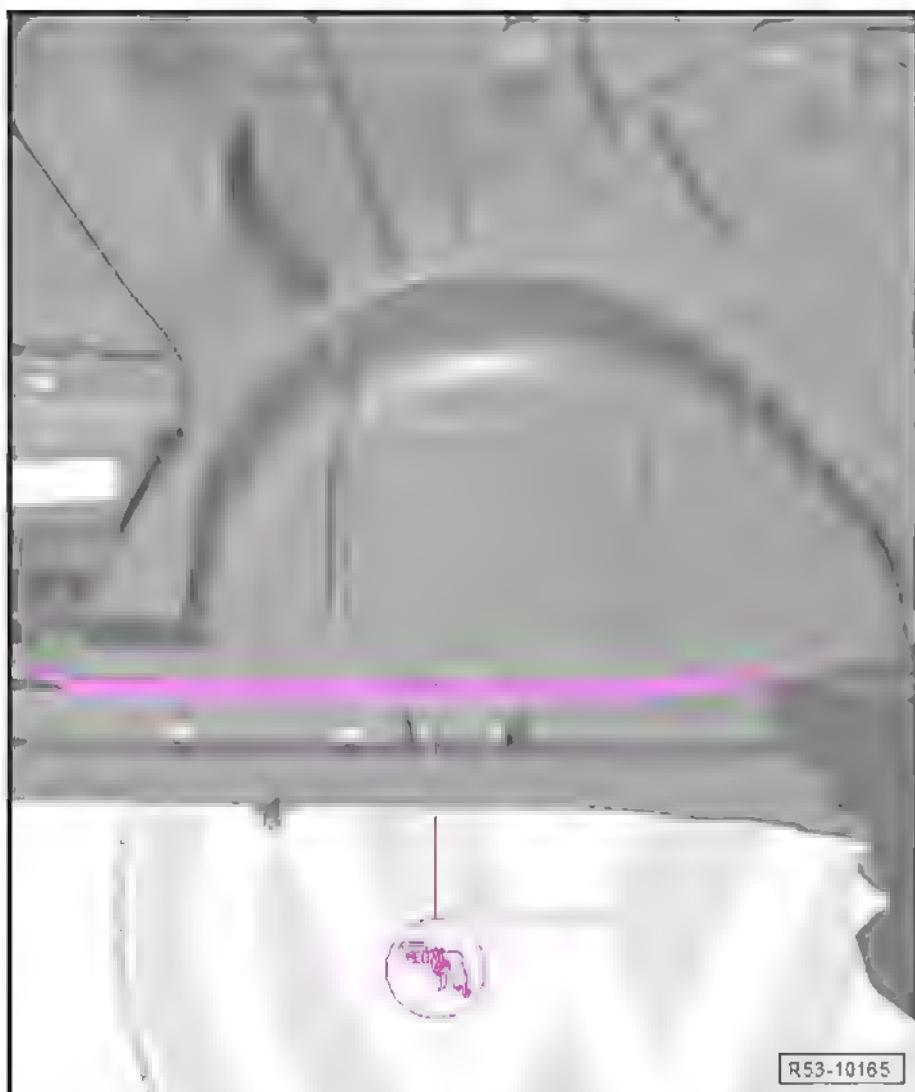
9.2 Remove

- Rear panel removed
- Spare wheel housing removed
- Longitudinal member reinforcement
- Bumper support

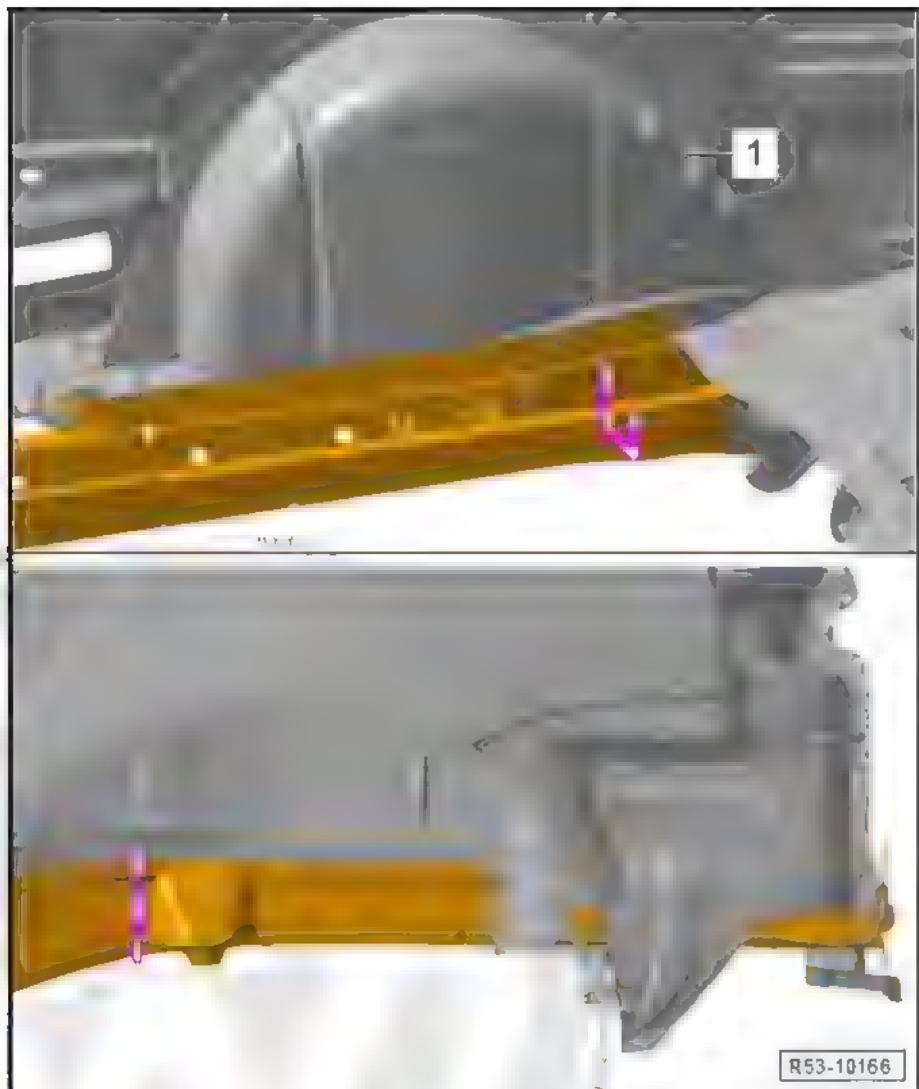


Note

Foam residues shall be removed as much as possible before sanding tasks.



- Undo plate connections with wheel arch.



- Only cut the longitudinal member's plate, as shown. Do not damage the internal reinforcement -1-.
- Remove plate residues.

9.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 229](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information, Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

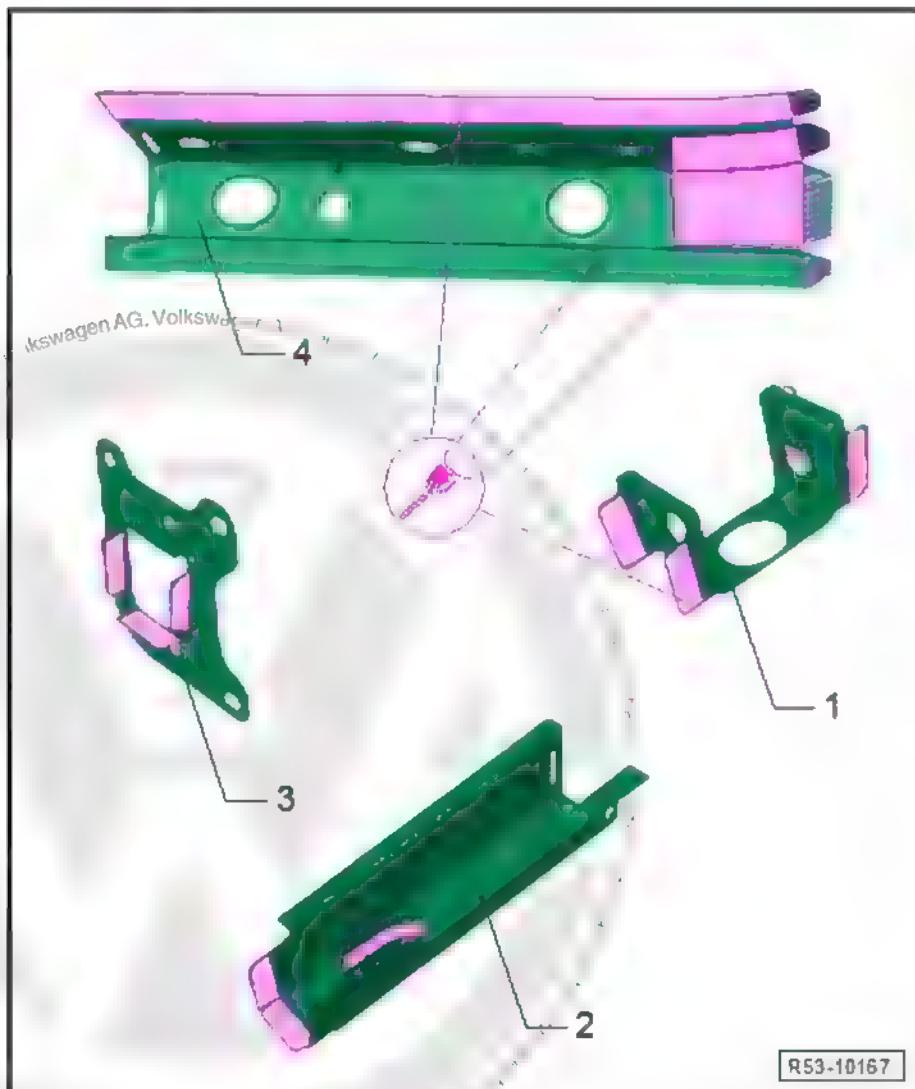
9.3.1 Prepare the new part

Replacement part

- ◆ 1 - Reinforcement
- ◆ 2 - Longitudinal member extension



- ◆ 3 - Bumper support
- ◆ 4 - Longitudinal member, partial part
- ◆ Foam part/support



R53-10167

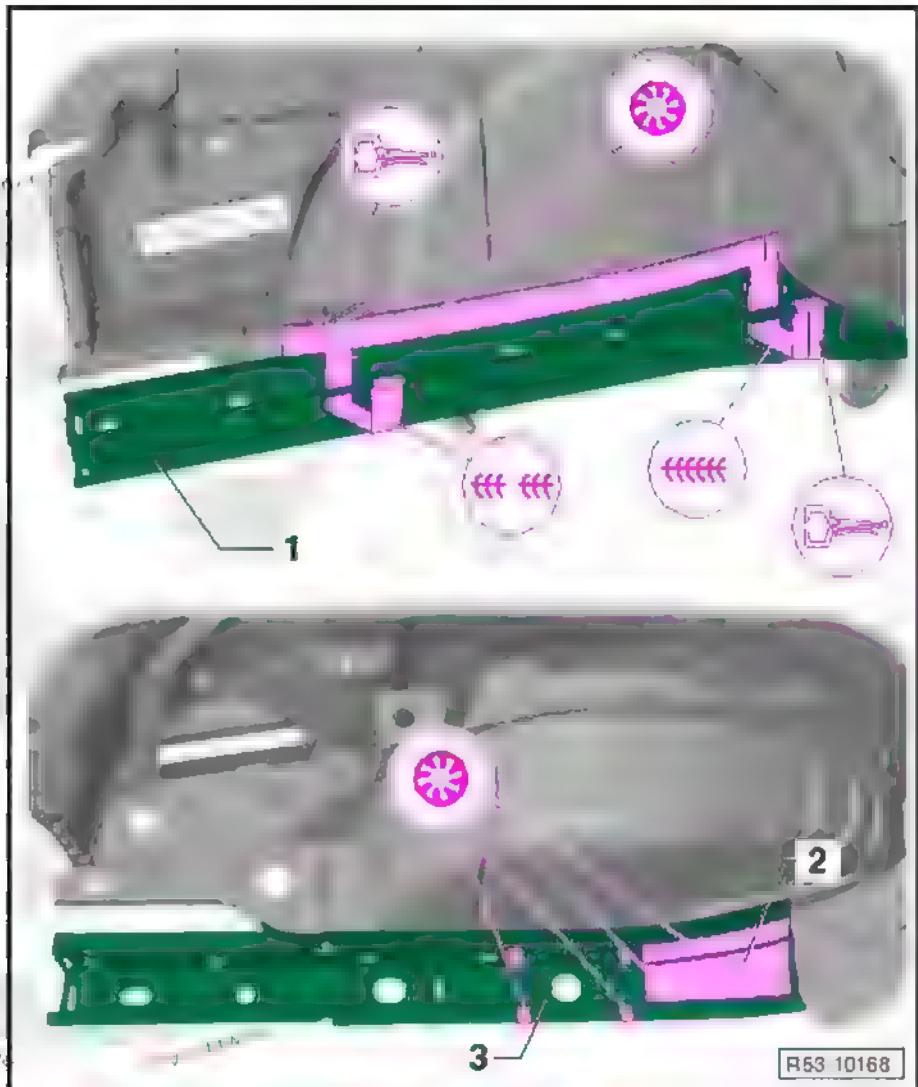
- Transfer cut to the partial longitudinal member -4- and cut, in this case, you must consider an extra 15 mm of material for the overlapping.
- Make holes for SG - continuous seam, Ø 8 mm.

9.3.2 Foam part/support

Follow the repair instructions .

9.3.3 Welding

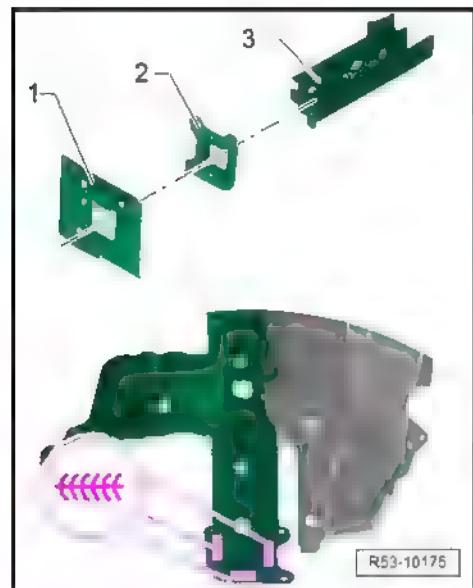
- Adjust and fasten the new part to the spare wheel housing and with the vehicle on the alignment platform.



- Place the (partial) longitudinal member and the longitudinal member extension -1-.
- Weld the (partial) longitudinal member, SG - continuous seam and SG - hole fulfilment seam on the wheel arch.
- Weld the longitudinal member reinforcement -2- SG - hole ful-
filment seam on wheel arch.



- Weld the reinforcement -3- SG - hole fulfilment seam on wheel arch.
- Fit the support -2- to longitudinal member extension -3-. Place the back panel -1- to define the supporting position -2- in relation to back panel -1-.
- Weld the support -2- with SG - continuous seam.





RO 53 55 55 00

10 External side panel (2 doors - partial part) - replace



DANGER!

Follow the safety instructions!

Since gases extremely harmful to people's health and the environment are created when separating with spark-generating equipment and tools or when tin-plating in areas containing foam, such procedures must always be avoided when welding.

⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

10.1 Tools



Note

- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.*

10.2 Remove



1 - Stuck area

2 - Partial replacement separation line

- Carry out cut -A- and -C- according to damage.
- Carry out cut -B-, as showed. Do not damage internal reinforcements.

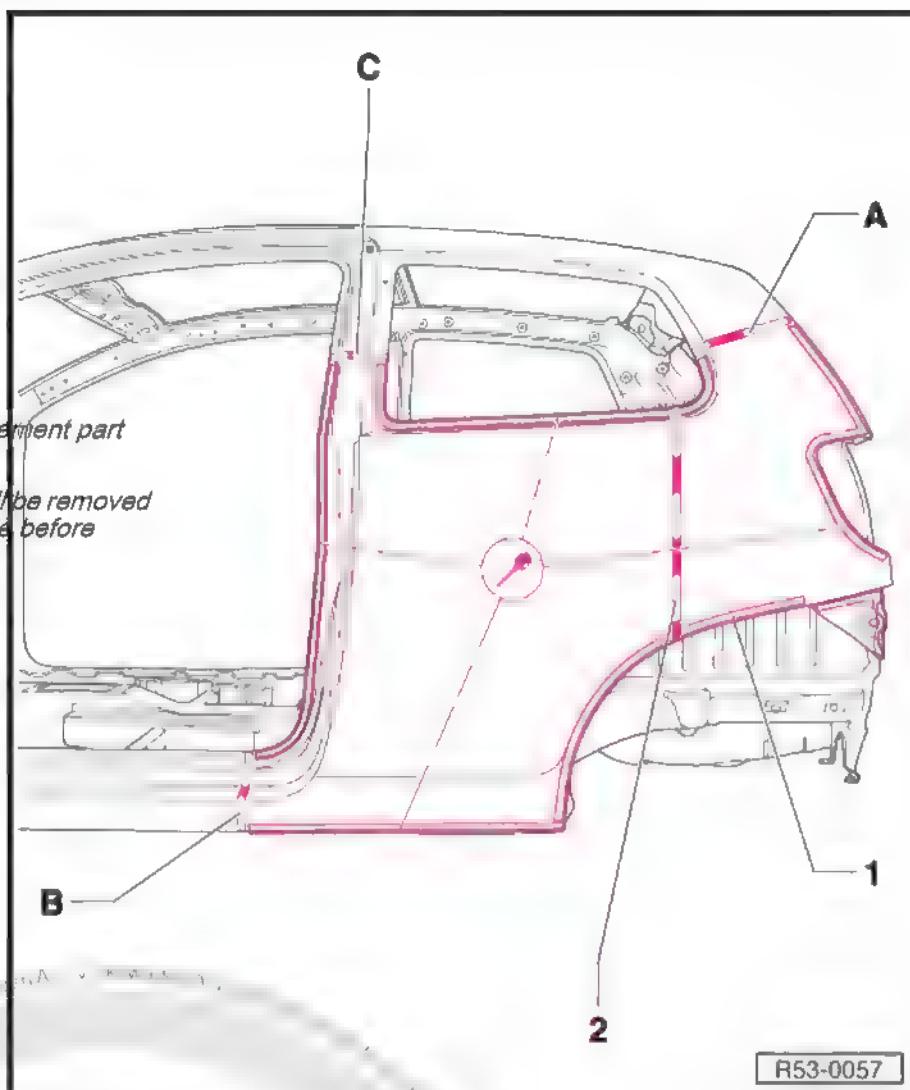


Note

- ◆ Observe the replacement part cut.
- ◆ Foam residues shall be removed as much as possible before sanding tasks.

Roughly cut the side panel.

Undo plate connections.

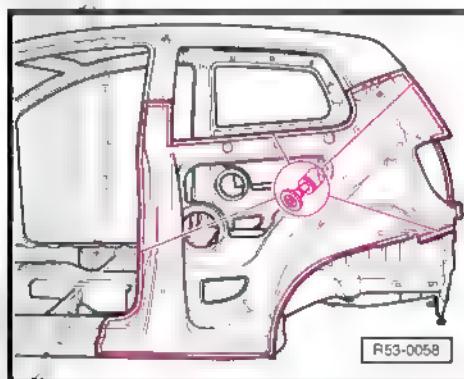


Partial renewal

Partial replacement is possible with the indicated cut -2-.

Only carry out cutting with a pneumatic saw - V.A.G 1523-.

- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.
- Clean the edge area until it is free from dust and grease.





10.3 Install



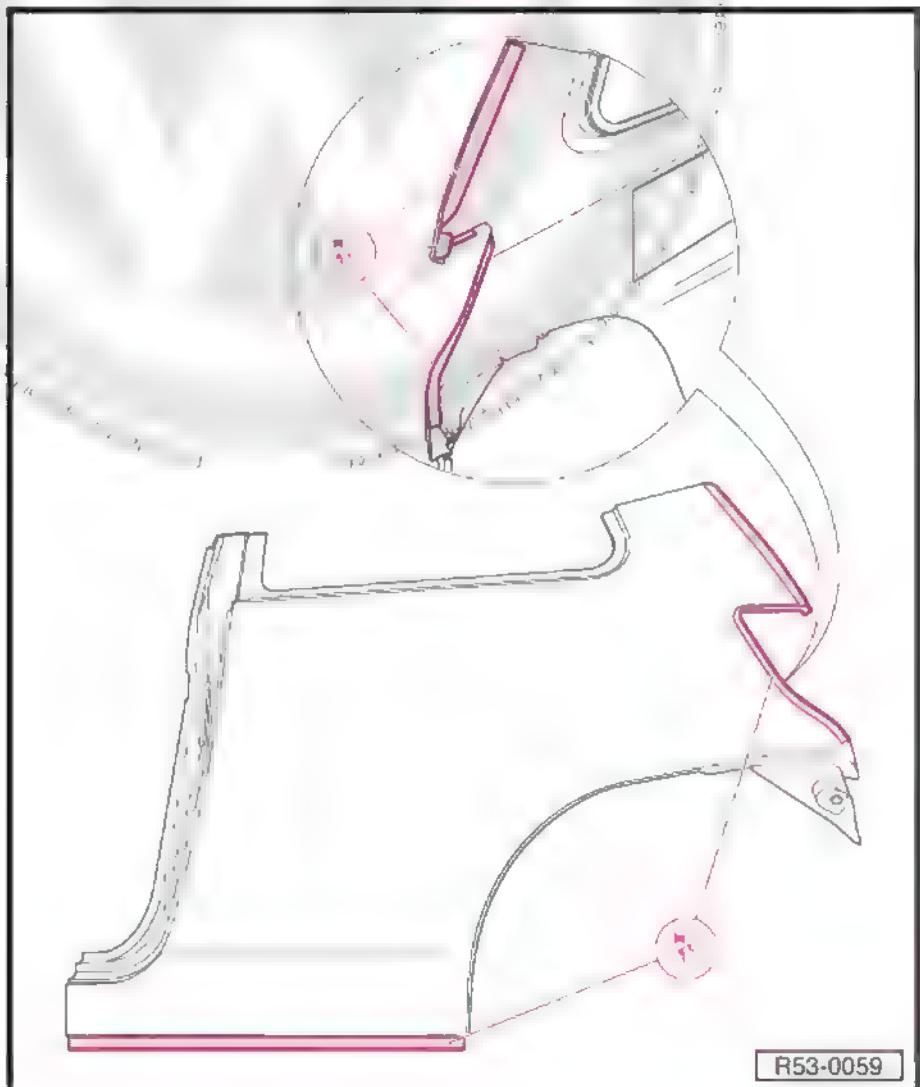
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 235](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs; General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

10.3.1 Prepare the new part

Replacement part

- ◆ Side frame partial part
- ◆ Foam part/support
- ◆ 2K body adhesive - D 180 003 M2-





- Pass the separation cuts to new part and cut.
- Make holes for SG - continuous seam, 8 mm.

10.3.2 Foam part/support

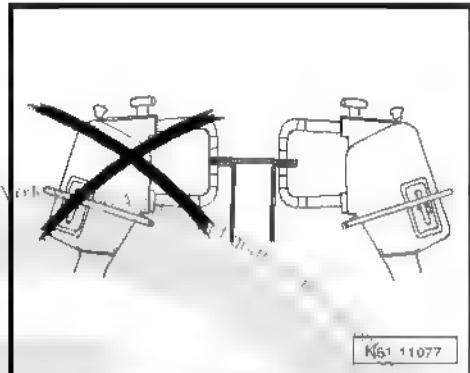
Follow the repair instructions .

10.3.3 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition.*



K61 11077

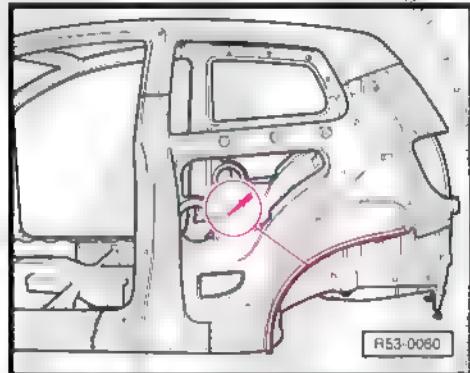
- Apply adhesive on the sticking area 2 beads with Ø 3.5 mm.



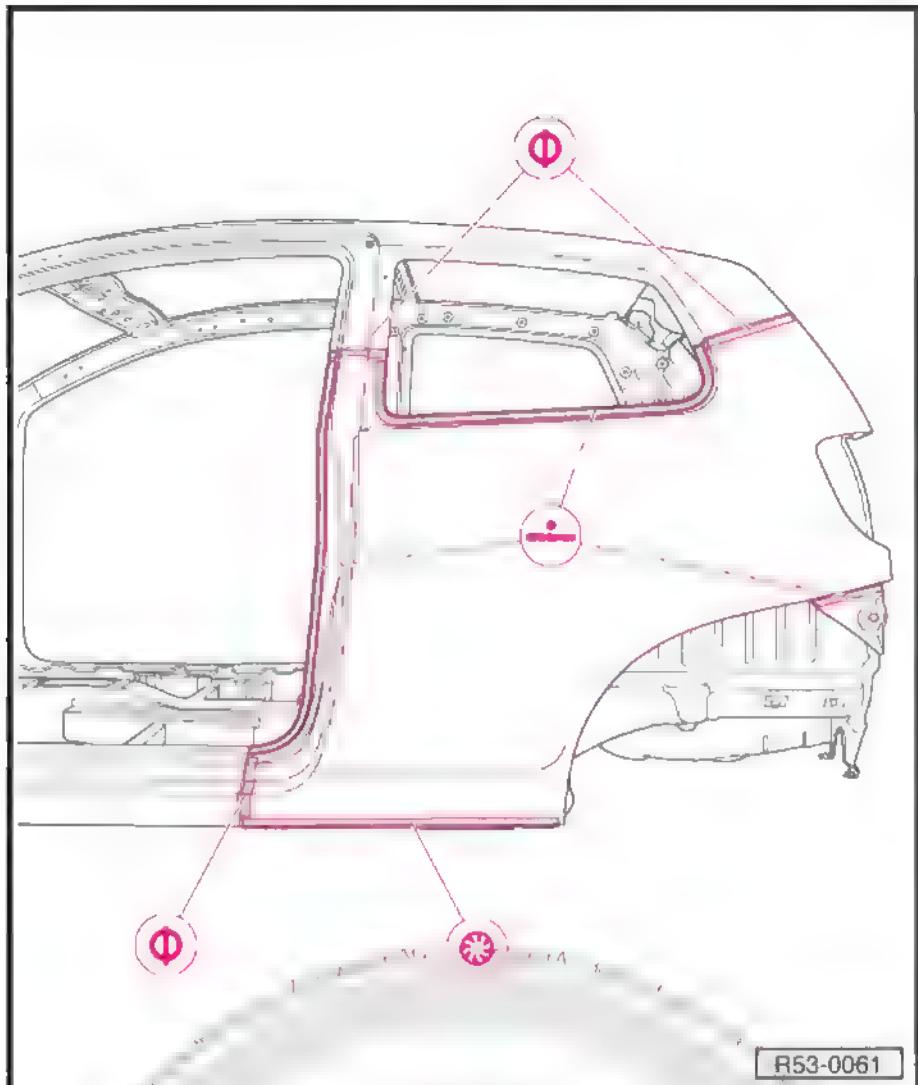
Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

- Place the material itself behind the separation cuts.
- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the adjustment with doors, tail lights and rear door.



R53-0060

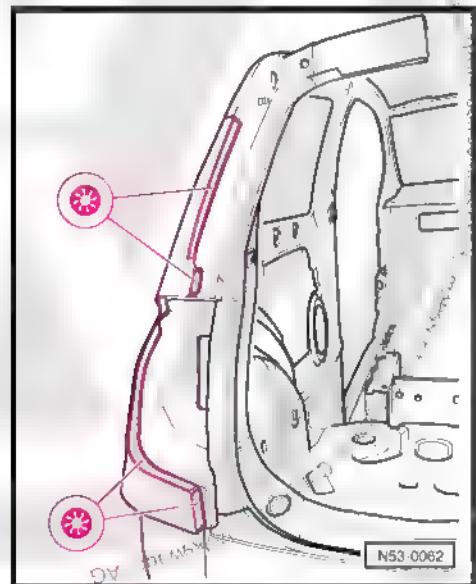


- Weld side panel, RP - spot seam (one row) and SG - hole fulfillment seam.
- Weld cuts, SG - backstitch seam
- Weld the side panel to the rear door cut and to the tail light housing, SG - hole fulfillment seam.
- Contour the wheel area flange
- Clean the adhesive that came out and seal the wheel area.



Note

Before welding, on the right side panel you must apply the butyl sealing cord on the fuel reservoir filling nozzle area.





RO 53 55 55 10

11 External side panel (4 doors - partial part) - replace



WARNING

Observe safety instructions!

Safety instructions ➤ General notes; Body repairs, Body assembly works; Safety notes.

11.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ➤ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ➤ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

11.2 Remove



1 - Separation line for partial replacement

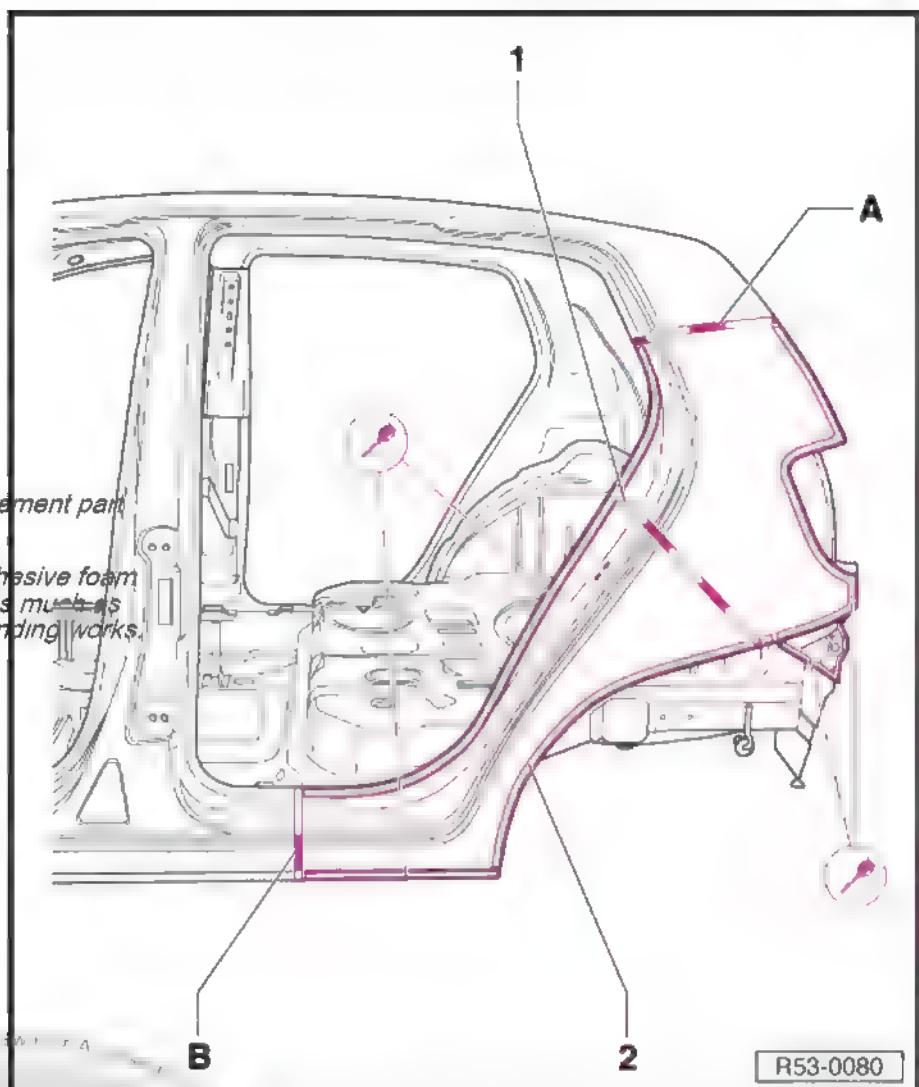
2 - Stuck area

- ◆ Carry out cut -A- according to damage.
- ◆ Carry out cut -B-, as showed. Do not damage internal reinforcements.
- ◆ Roughly separate side panel.
- ◆ Undo plate connections.



Note

- ◆ *Observe the replacement part cut.*
- ◆ *Remains of self-adhesive foam must be removed as much as possible, before sanding works.*

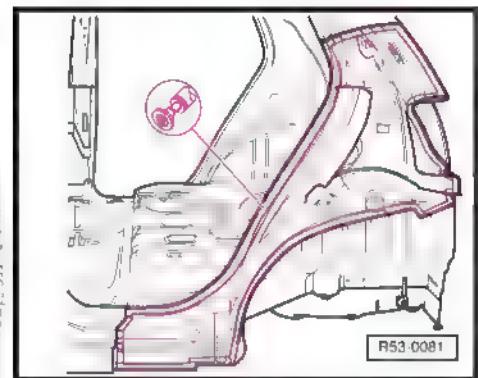


11.2.1 Part replacement

Partial replacement is possible with the indicated cut -1-.

Only carry out cut using a body saw - pneumatic saw - VAG 1523A- .

- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.
- Clean the edge area until it is free from dust and grease.





11.3 Install

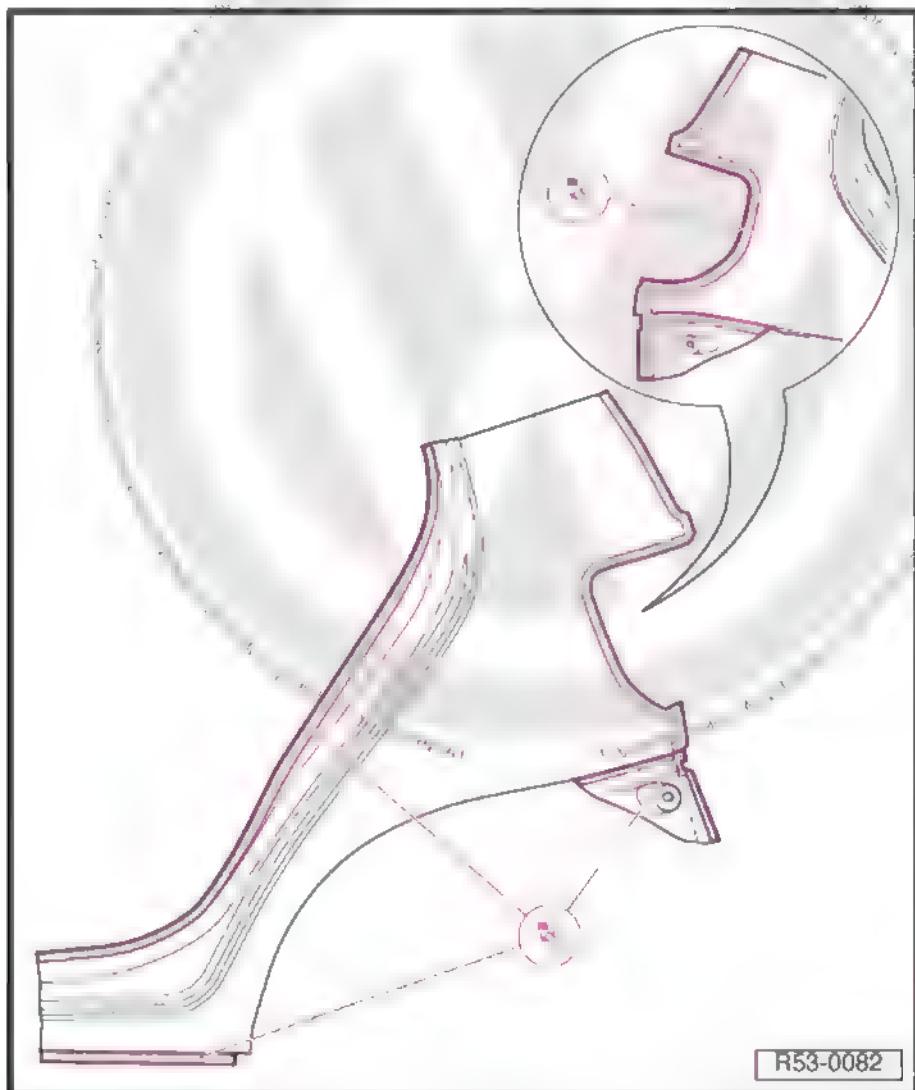


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 240](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs, General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

11.3.1 Prepare the new part

- ◆ Side panel
- Transfer cut to the new part and cut.



- Make Ø 8 mm holes for SG - continuous seam

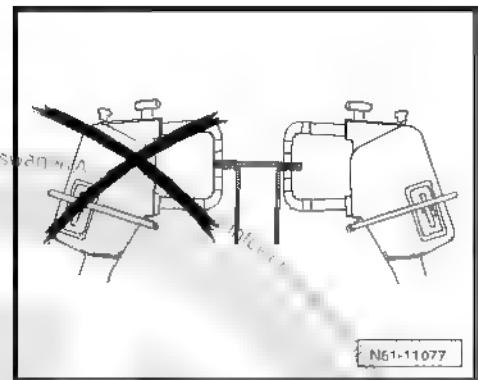


11.3.2 Welding



Note

- ◆ *Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.*
- ◆ *The rigidity of the set is determined by the weld disposition*



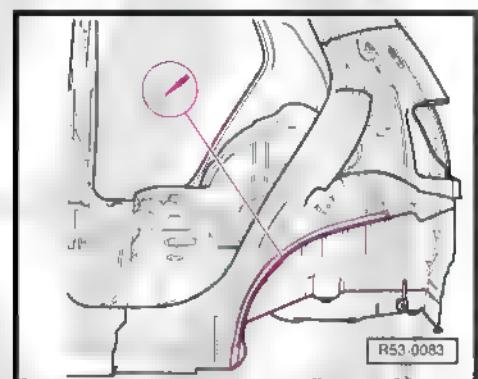
- Apply assembly adhesive - DA.001 730 A1- on the gluing area, with 2 Ø 3.5-mm beads.

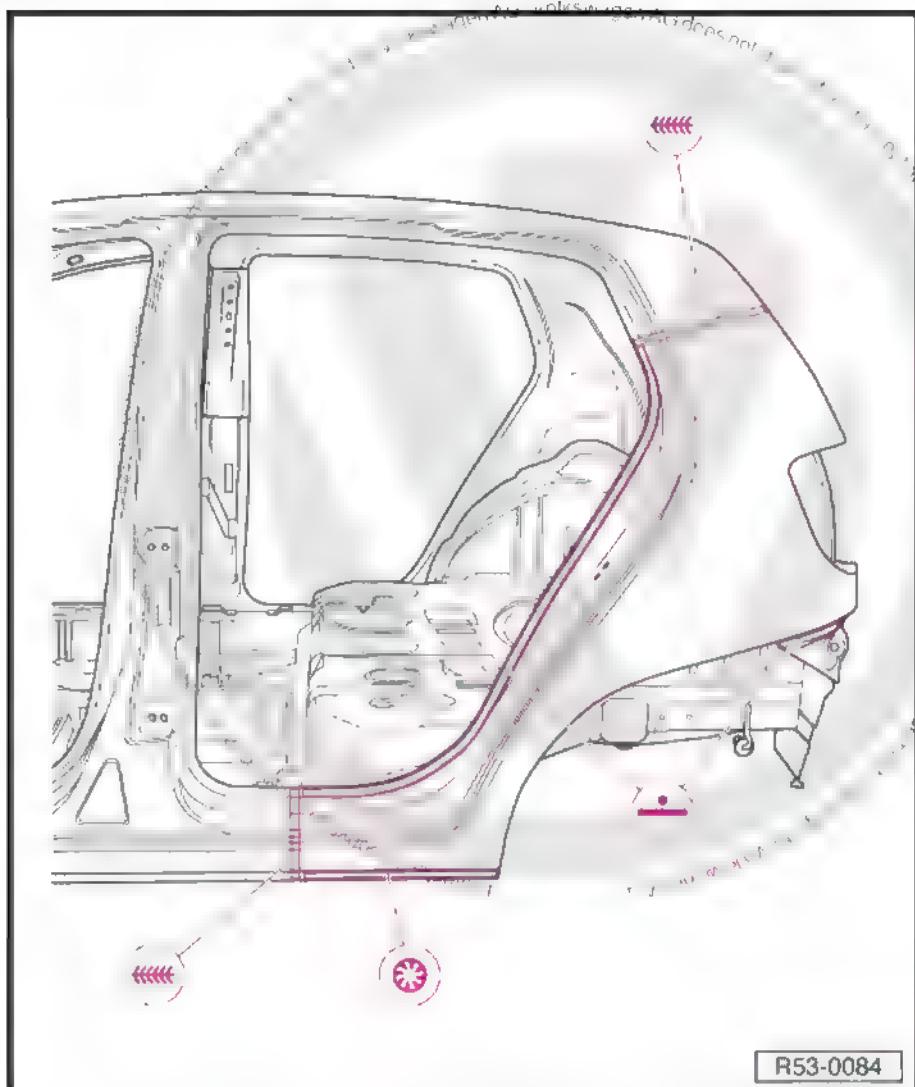


Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the adjustment with doors, tail lights and rear lid.
- Weld in the pillar C area and lower longitudinal member with SG - continuous seam.

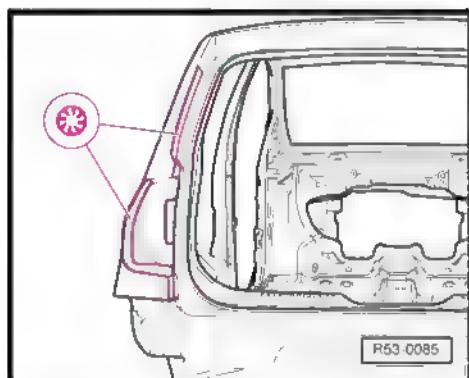




- Weld lower longitudinal member in upper area with RP - spot seam (one row).
- Weld lower longitudinal member in the lower area with SG - hole fulfilment seam.
- Weld the side panel to the rear door cut and to the tail light housing with SG - hole fulfilment seam.
- Contour the wheel area flange.
- Clean excess adhesive and seal the wheel area.



Before welding, on the right side panel, you must apply the butyl sealing cord to the fuel reservoir filling nozzle area





RO 53 55 55 20

12 External side panel (Spacefox - partial part) - replace



WARNING

Observe safety instructions!

Safety instructions ⇒ General notes; Body repairs, Body assembly works; Safety notes.

12.1 Tools



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

12.2 Remove



1 - Optional cut line

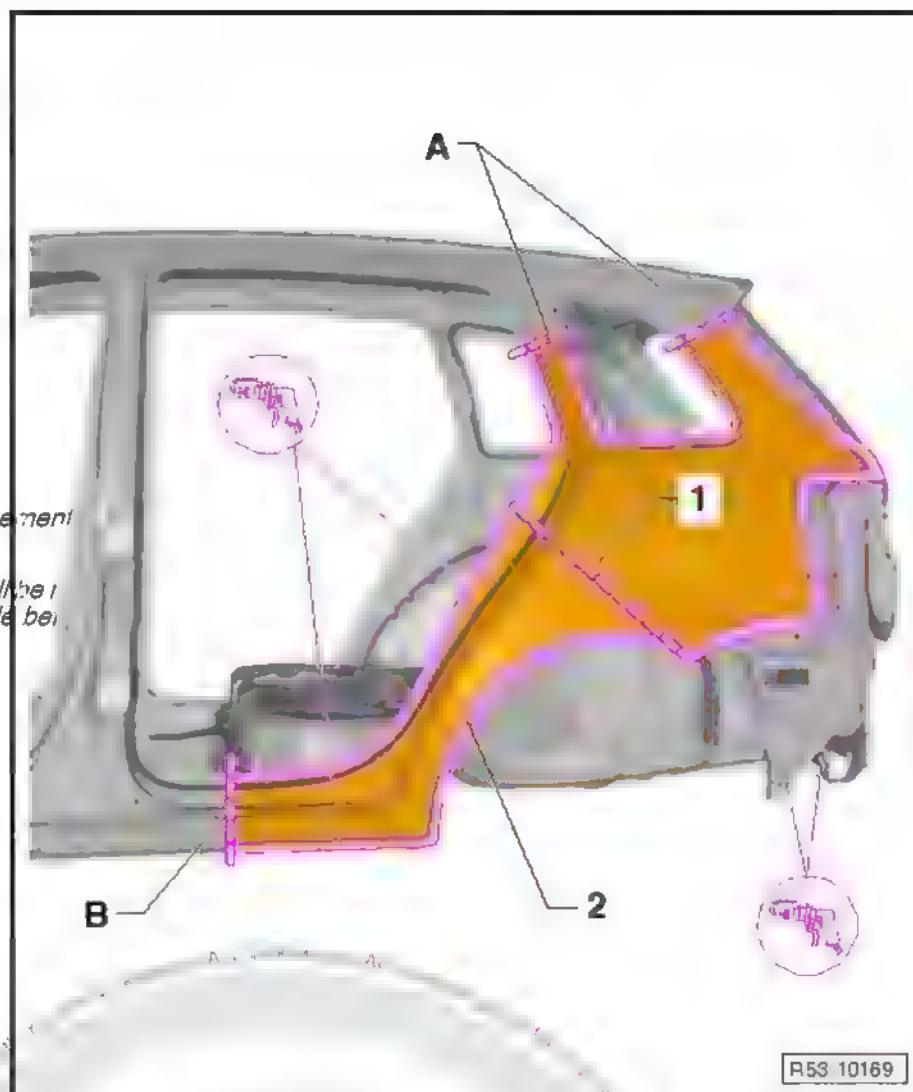
- Make the cut between -A- and -1- or between -B- and -1- according to the damage. Do not damage internal reinforcements.
- Make the cut between -A- and -B- when replacing with a higher damage level. Do not damage internal reinforcements.



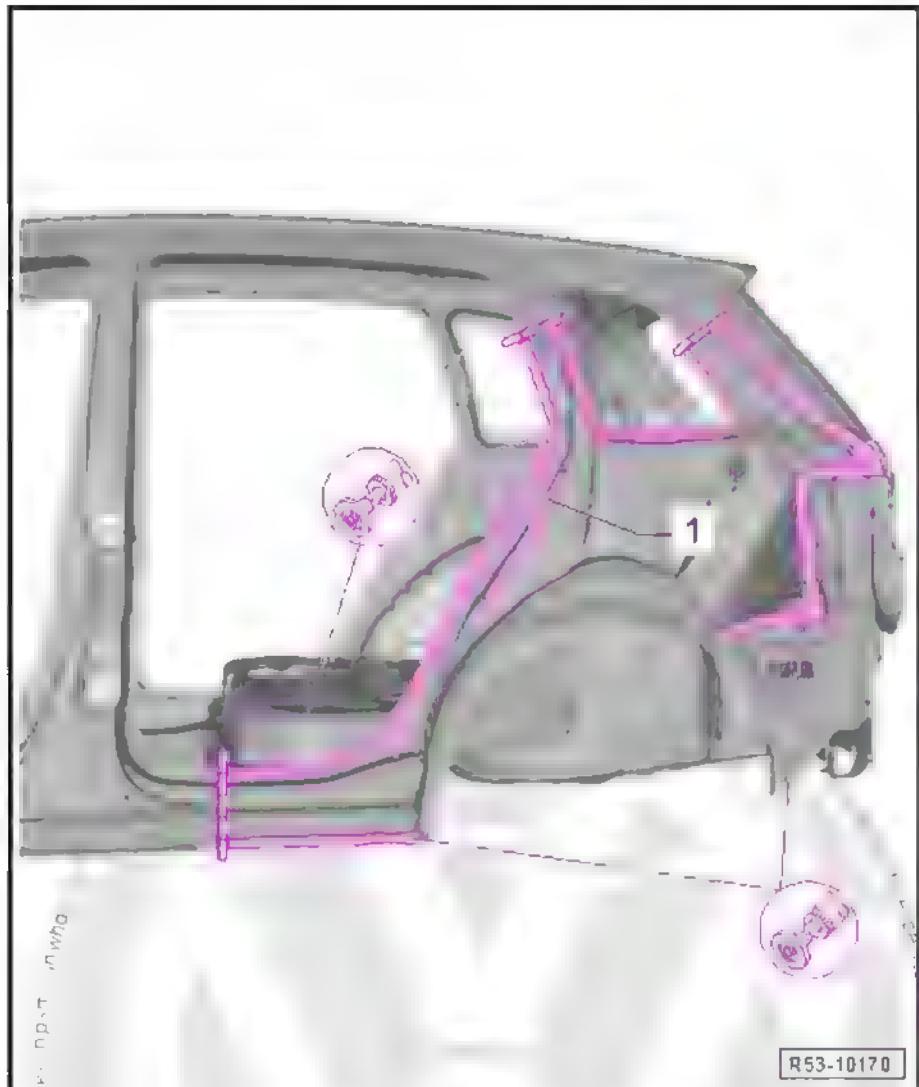
Note

- Observe the replacement cut.
- Foam residues shall be as much as possible before sanding tasks.

2 - Stuck area



- Roughly cut the side panel with pneumatic saw - VAG 1523A- .
- Undo plate connections.



- Remove plate residues.
- Remove all adhesive residues -1 and sand the sticking surfaces until bare metal is visible.
- Clean the edge area until it is free from dust and grease.

12.3 Install



Note

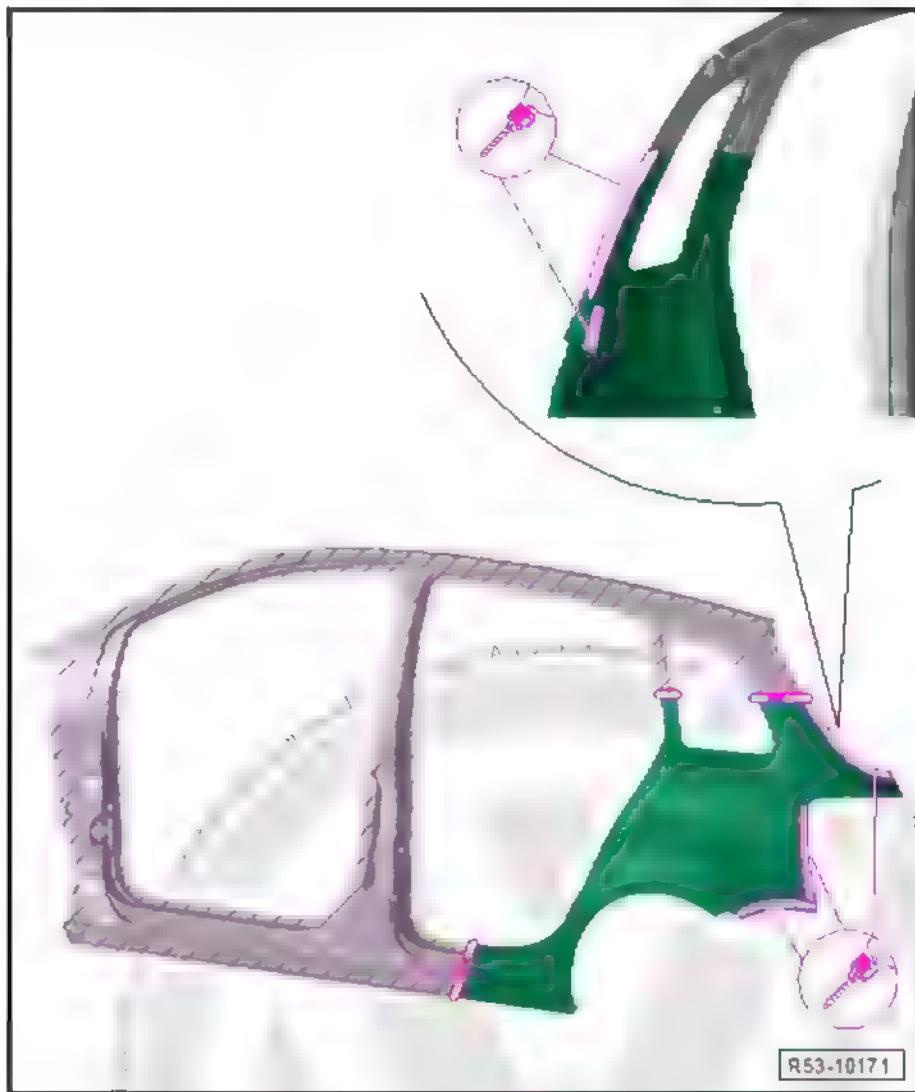
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
[⇒ page 245](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

12.3.1 Prepare the new part

- ◆ Side panel
- ◆ Foam part/support



- ◆ 2K body adhesive - D 180 003 M2-



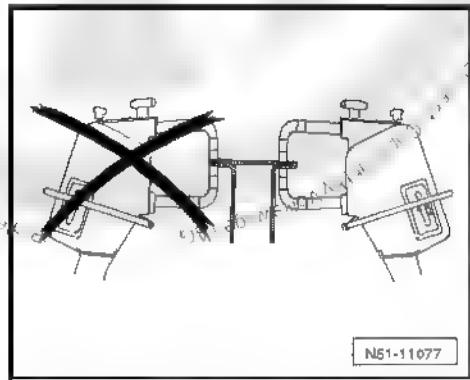
- Transfer cut to the new part and cut.
- Make Ø 8 mm holes for SG - continuous seam.

12.3.2 Welding



Note

- ◆ Welding spots RP - spot seam (one row) shall be performed in the centre of the area indicated to welding.
- ◆ The rigidity of the set is determined by the weld disposition.
- ◆ Apply 2K Body adhesive - D 180 003 M2- on the gluing area, with 2 Ø 3.5-mm beads.

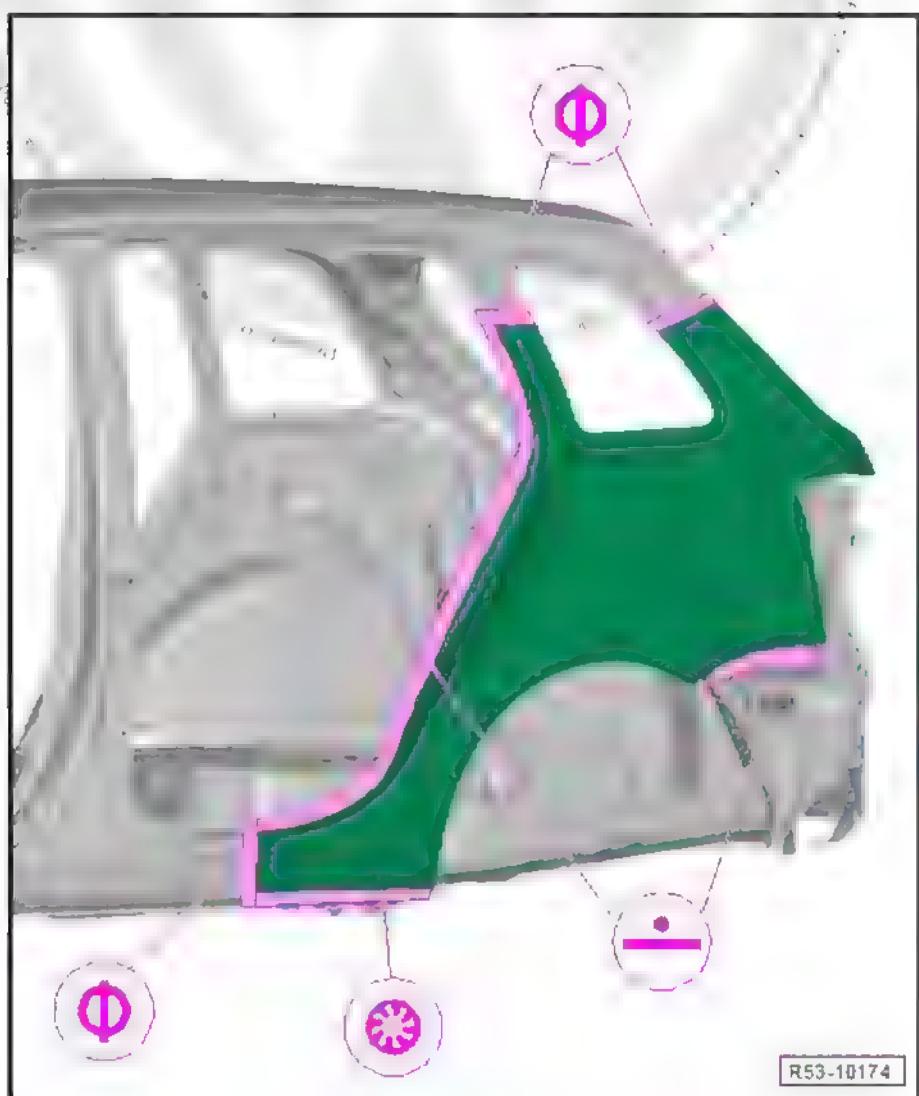
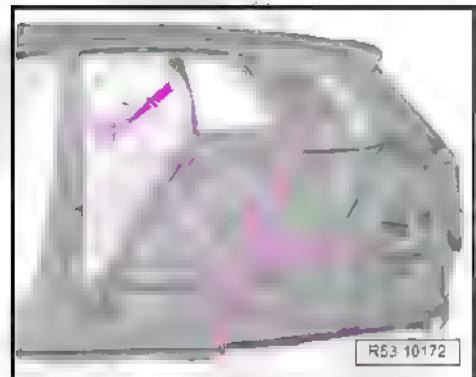




Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check the adjustment with doors, tail lights and rear lid.



- Weld in the pillar C area and lower longitudinal member with SG - continuous seam.
- Weld lower longitudinal member in upper area with RP - spot seam (one row).



- Weld lower longitudinal member in the lower area with SG - hole fulfilment seam.
- Weld the side panel to the rear door cut and to the tail light housing with SG - hole fulfilment seam.
- Contour the wheel area flange.
- Clean excess adhesive and seal the wheel area.



Note

Before welding, on the right side panel, you must apply the butyl sealing cord to the fuel reservoir filling nozzle area.





RO 53 69 55 50

13 Wheel arch (2 doors - external section) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

13.1 Tools

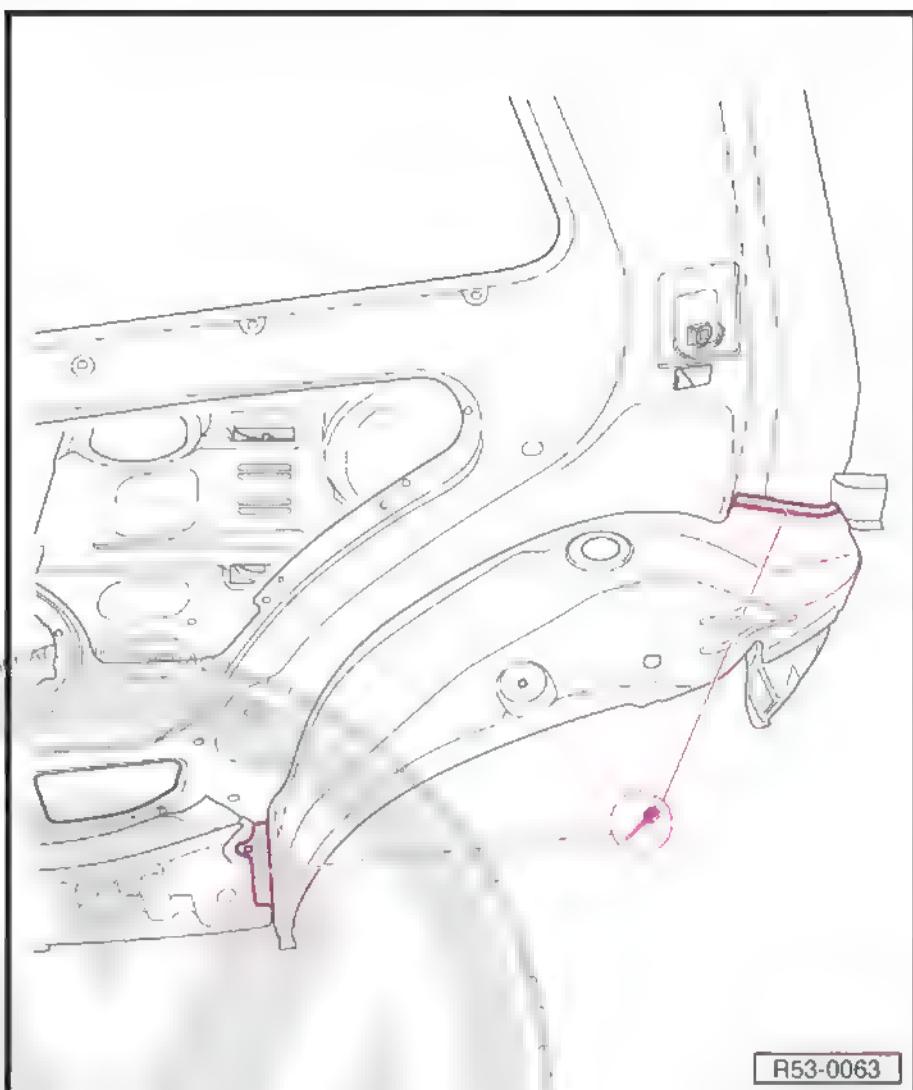


Note

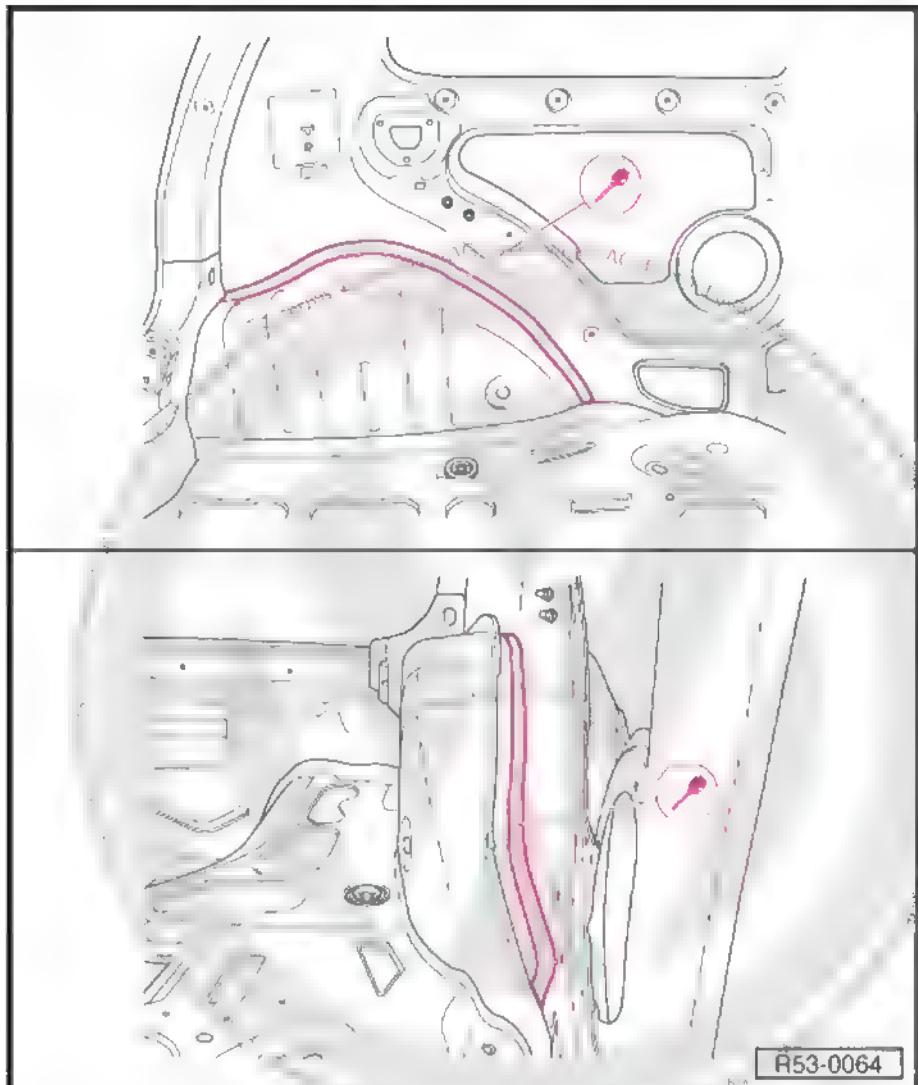
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

13.2 Remove

- Side panel removed.
- Lower longitudinal member removed



- Undo plate connections from outside with internal section of side panel.



- Undo plate connections from inside with the internal section of the side panel and with the internal section of the wheel arch.
- Remove plate residues.

13.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 251](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information, Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

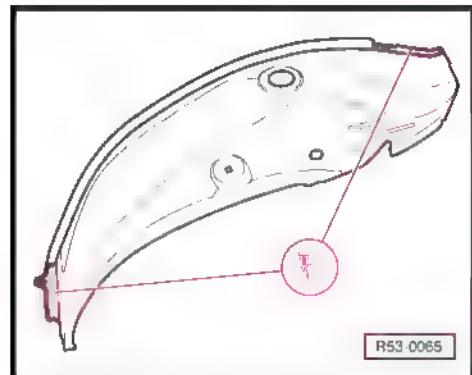
13.3.1 Prepare the new part

Replacement part

- ◆ Wheel arch (external) removed

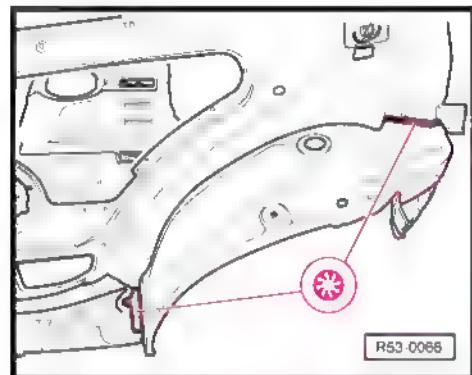


- Make holes for SG - continuous seam, Ø 8 mm.

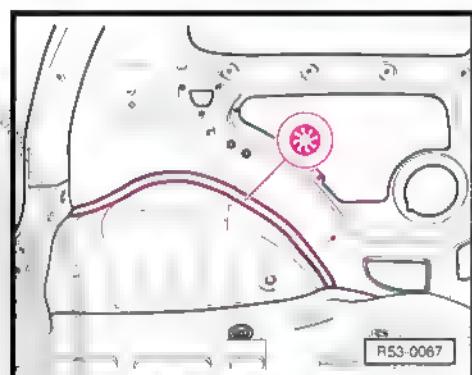


13.3.2 Welding

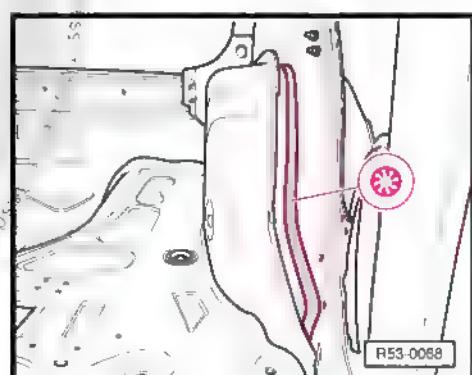
- Adjust and fasten wheel arch with the vehicle on its wheels or on the alignment platform.
- Check adjustment with side panel and lower longitudinal member.
- Weld wheel arch from outside, SG - hole fulfilment seam.



- Weld external section with internal section of wheel arch, SG - hole fulfilment seam.



- Weld from inside other connections with the internal section of the side panel, SG - hole fulfilment seam.
- Weld the lower longitudinal member .
- Weld side panel [page 238](#) .





RO 53 69 55 51

14 Wheel arch (4 doors - external section) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

14.1 Tools

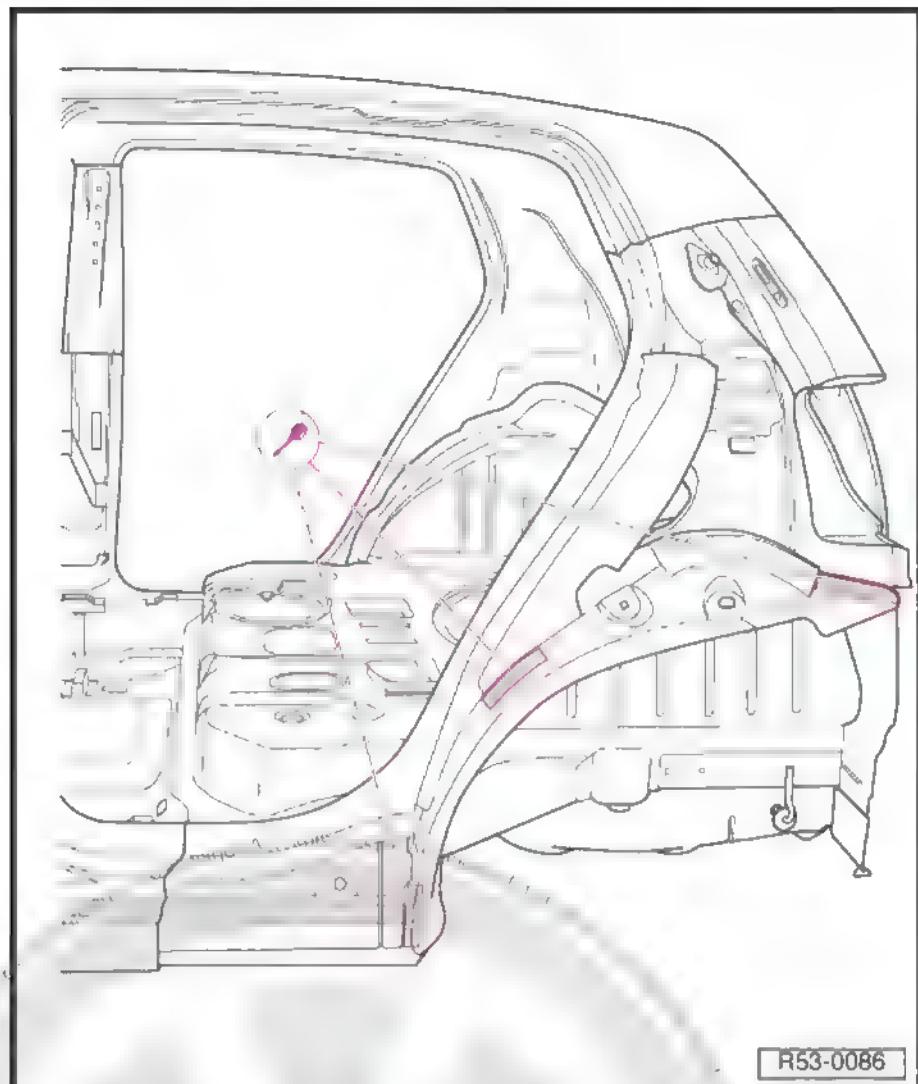


Note

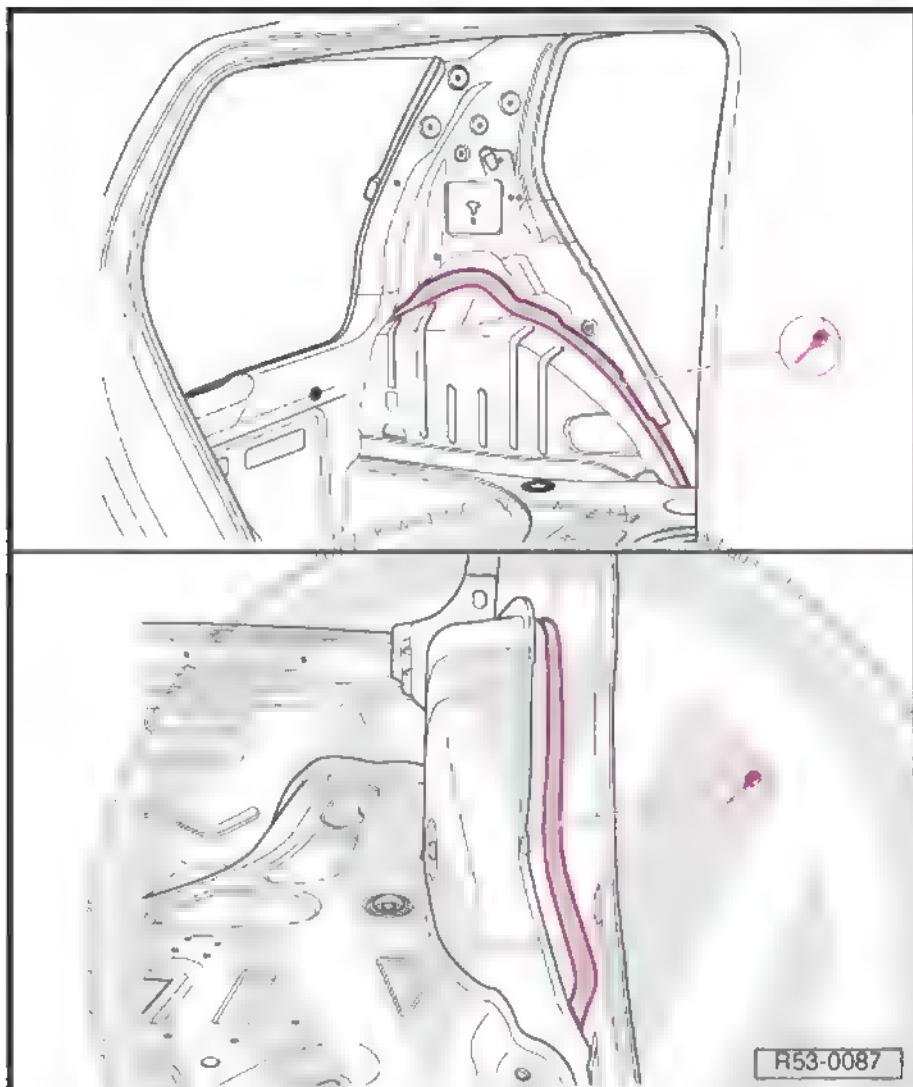
- ◆ *Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.*
- ◆ *Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.*

14.2 Remove

- Side panel removed.



- Undo plate connections from outside with internal section of side panel.
- Undo plate connections with structure reinforcement support.
- Undo plate connections from inside with the internal section of the side panel and with the internal section of the wheel arch.



R53-0087

- Remove plate residues.

14.3 Install



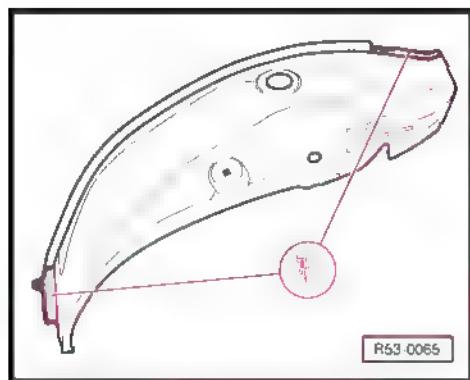
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ page 255.
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding



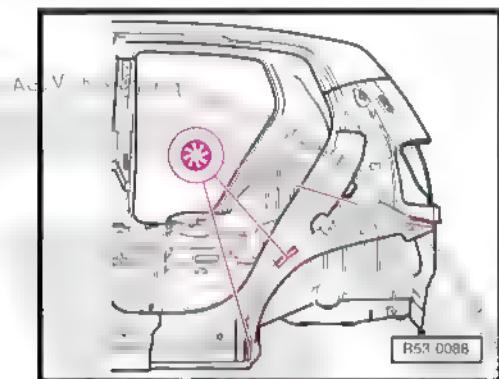
14.3.1 Prepare the new part

- ◆ External wheel arch
- Make \varnothing 8 mm holes for SG - continuous seam

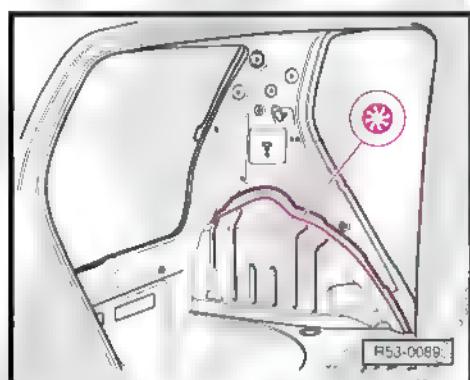


14.3.2 Welding

- Adjust and fasten the wheel case protector with the vehicle on its wheels or on the alignment platform.
- Check adjustment with side panel and lower longitudinal member.
- Weld wheel arch from outside, SG - hole fulfilment seam.



- Weld external section with internal section of wheel arch, SG - hole fulfilment seam.



- Weld from inside other connections with the internal section of the side panel, SG - hole fulfilment seam.
- Weld side panel [page 240](#).





RO 53 69 55 51

15 Wheel arch (Spacefox - external section) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

15.1 Tools



Note

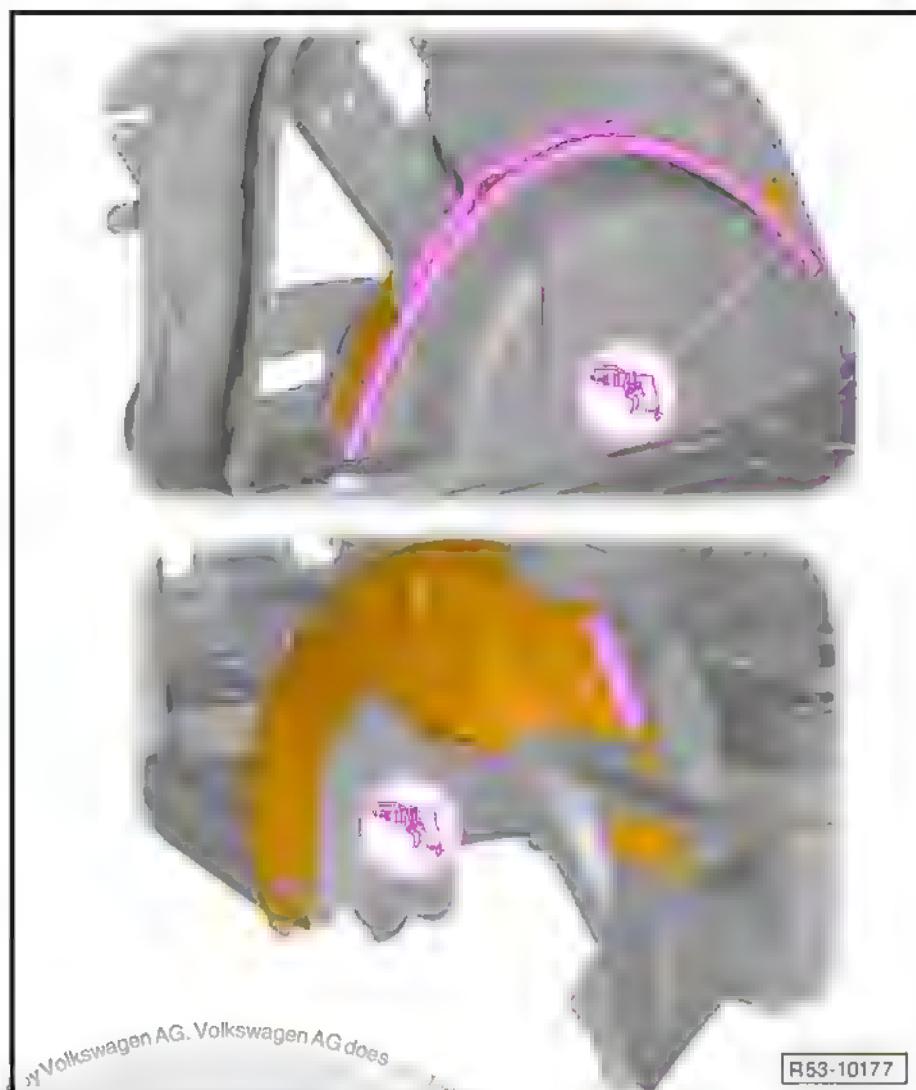
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip.,
Manual for the Brazilian market or in the portal AG Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

15.2 Remove

- Side panel removed.



- Undo plate connections from outside with internal section of side panel.
- Undo the plate joining areas with lower longitudinal member and luggage compartment's floor.



- Undo plate connections from inside with the internal section of the side panel and with the internal section of the wheel arch.
- Undo plate connections from inside with the internal section of the side panel and with the internal section of the wheel arch.
- Remove plate residues.





15.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 259](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

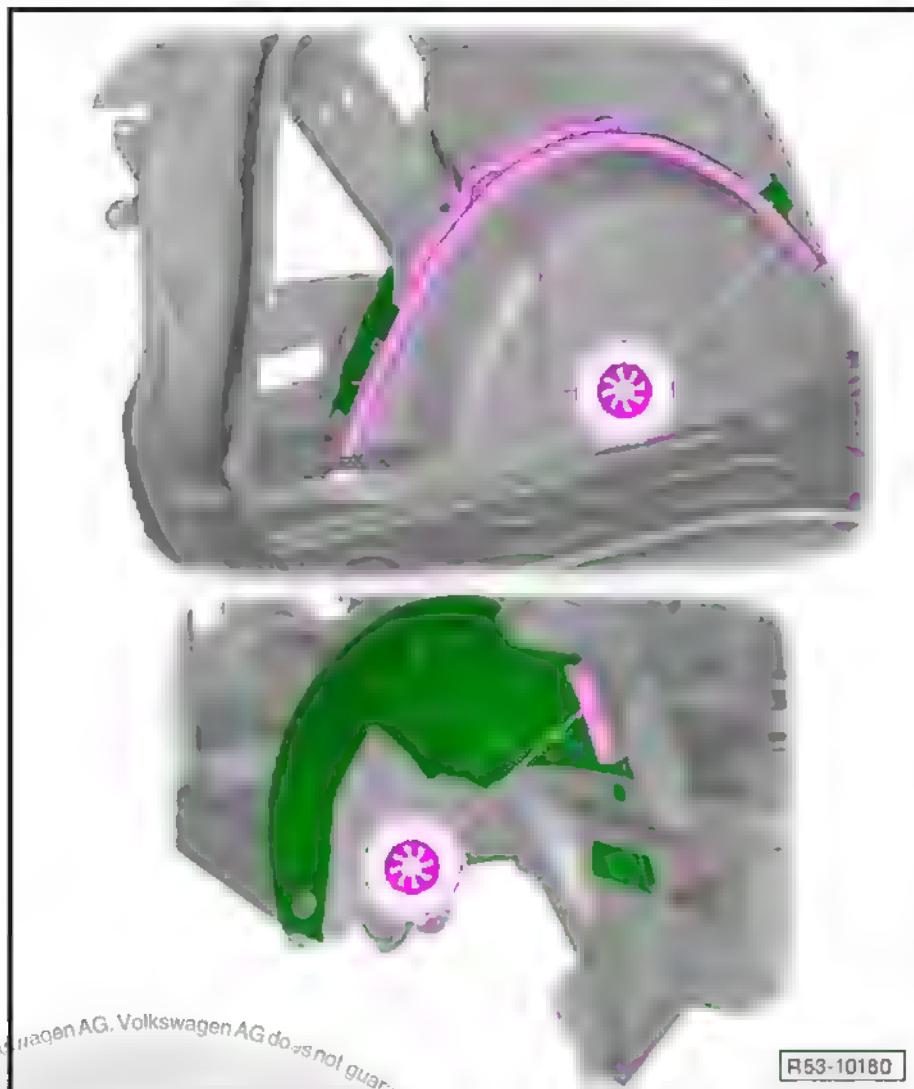
15.3.1 Prepare the new part

- ◆ External wheel arch.
- Remove the paint layer for welding of the internal side panel.
- Make Ø 8 mm holes for SG - continuous seam.



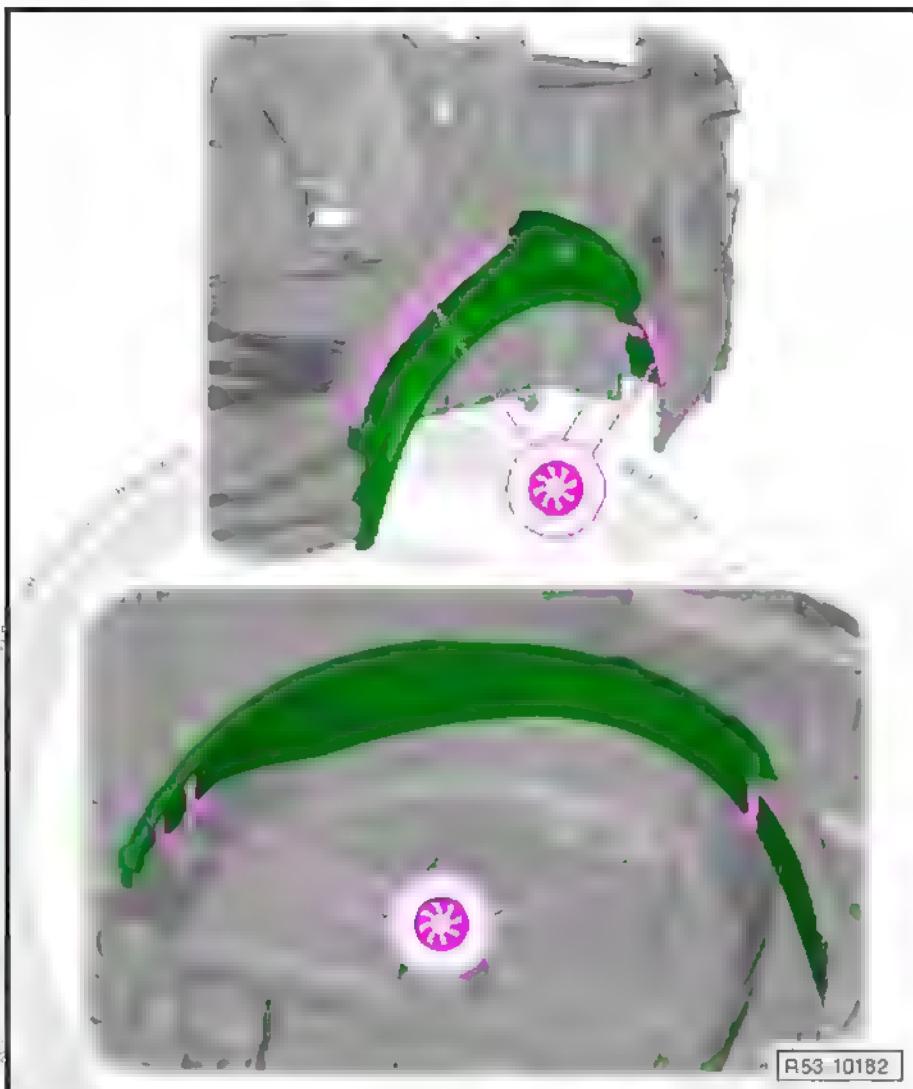
15.3.2 Welding

- Adjust and fasten the wheel case protector with the vehicle on its wheels or on the alignment platform.
- Check adjustment with side panel and lower longitudinal member.



- Weld external section with internal section of wheel arch, SG - hole fulfilment seam.
- Weld wheel arch from outside, SG - hole fulfilment seam.





- Weld from inside other connections with the internal section of the side panel, SG - hole fulfilment seam.
- Weld side panel ⇒ page 245 .



RO 53 80 55 50

16 Spare wheel housing (Fox) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

16.1 Tools



Note

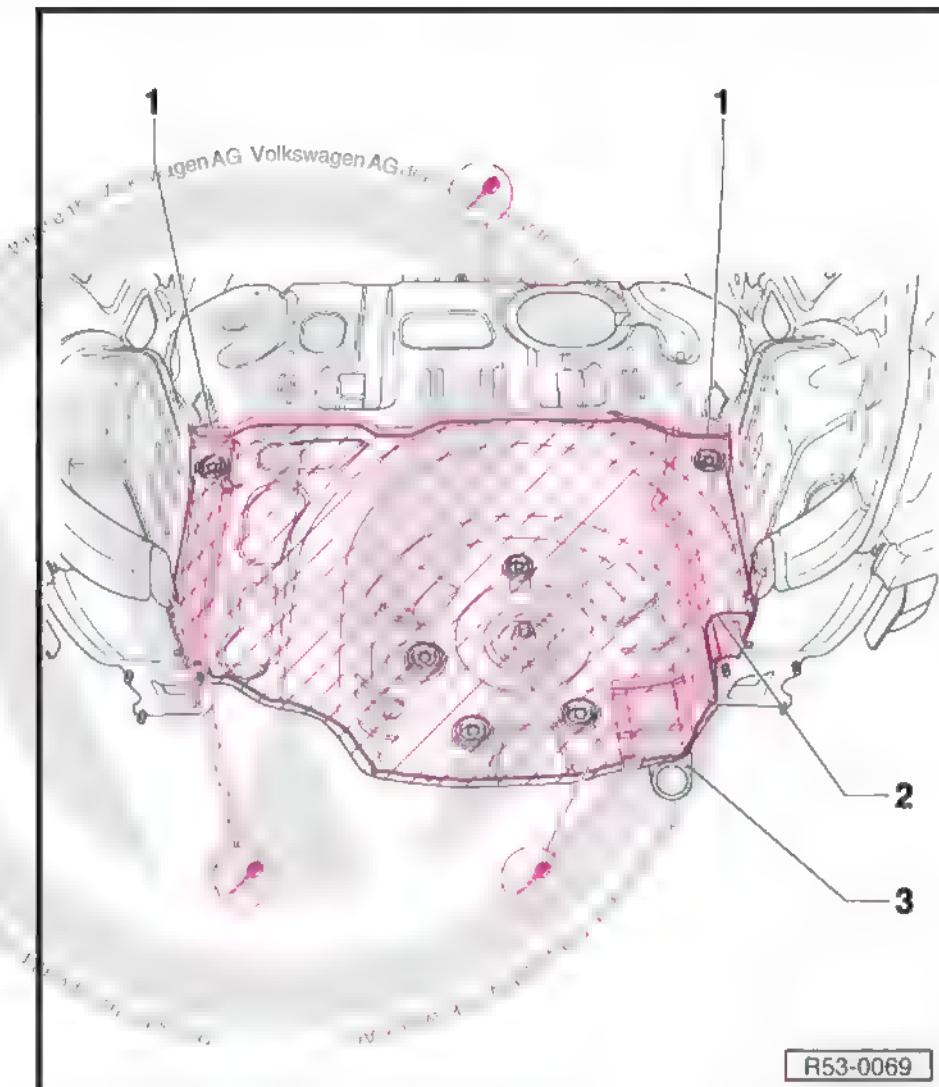
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal ⇒ Tech. Support, Sist. and Info. of Services, Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

16.2 Remove

- Rear panel removed.



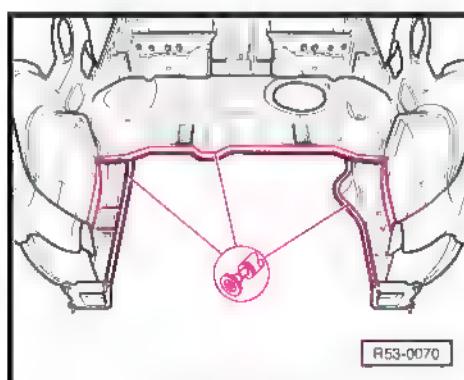
1 - Stuck area



- Drill the original connection with the front floor plate and with the right and left longitudinal members.
- Drill the right rear -2- reinforcement.
- Drill the rear tow hook -3- from below and, if necessary, reuse.

Remove and install tow hook [⇒ page 222](#).

- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.





16.3 Install



Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 265](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

16.3.1 Prepare the new part

Replacement part

- ◆ Spare wheel housing (replacement part name: floor plate)
- ◆ 2K body adhesive - D 180 003 M2-
- Make holes for SG - hole fulfilment seam.
- Apply adhesive on the sticking area, 2 beads with Ø 3.5 mm.

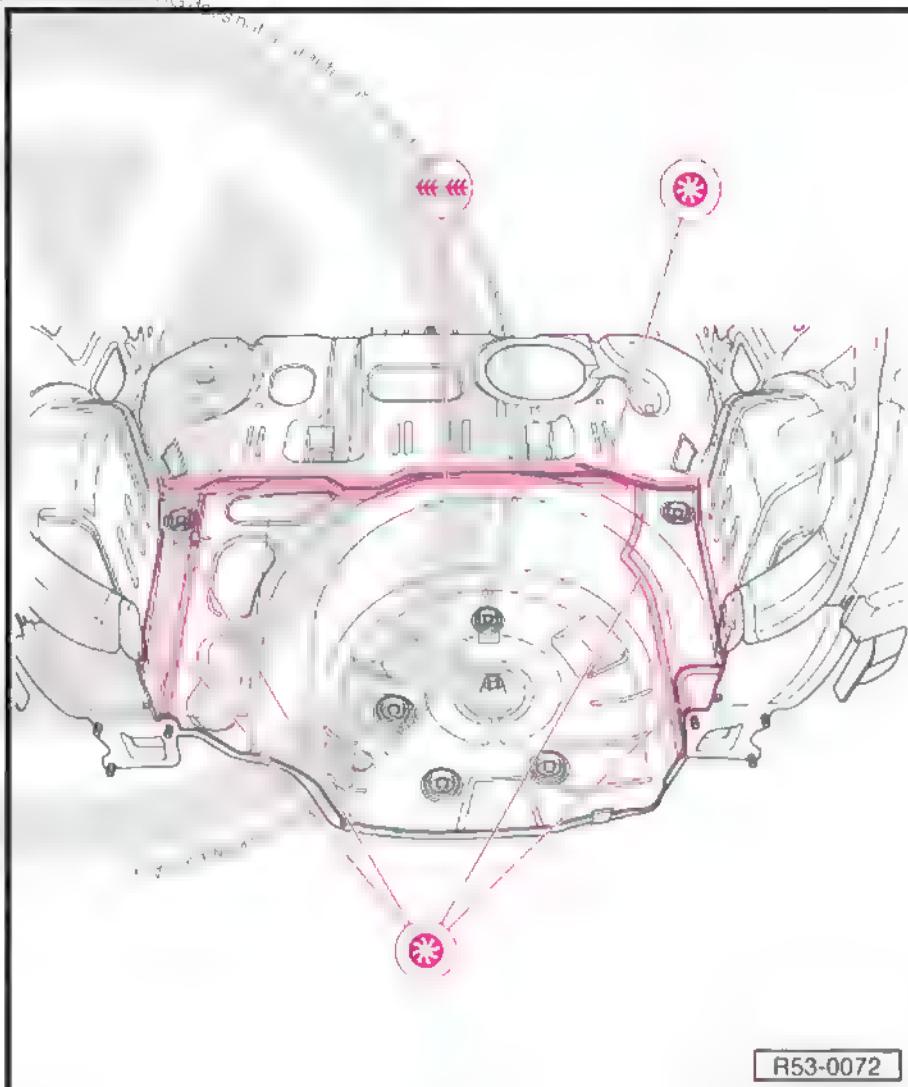


Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

16.3.2 Welding

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with rear panel.



- Weld the spare wheel housing in the connection area with the floor plate, SG - hole fulfilment seam.
- Weld the spare wheel housing in the connection area with the floor plate as well, SG - continuous seam.
- Weld other connections with rear longitudinal members, SG - hole fulfilment seam.
- Weld right rear reinforcement, SG - hole fulfilment seam.
- Weld the rear panel [⇒ page 199](#) .



RO 53 80 55 50

17 Spare wheel housing (Spacefox) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ;
Safety instructions

17.1 Tools



Note

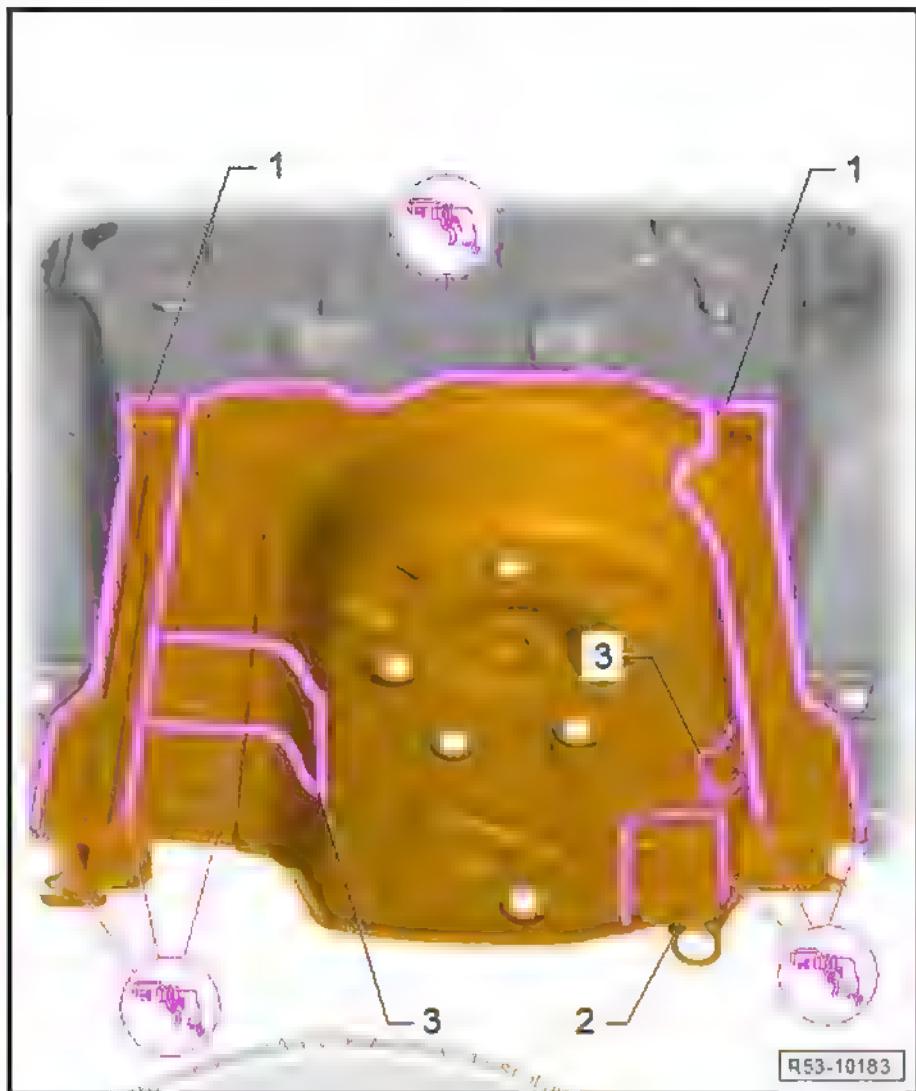
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

17.2 Remove

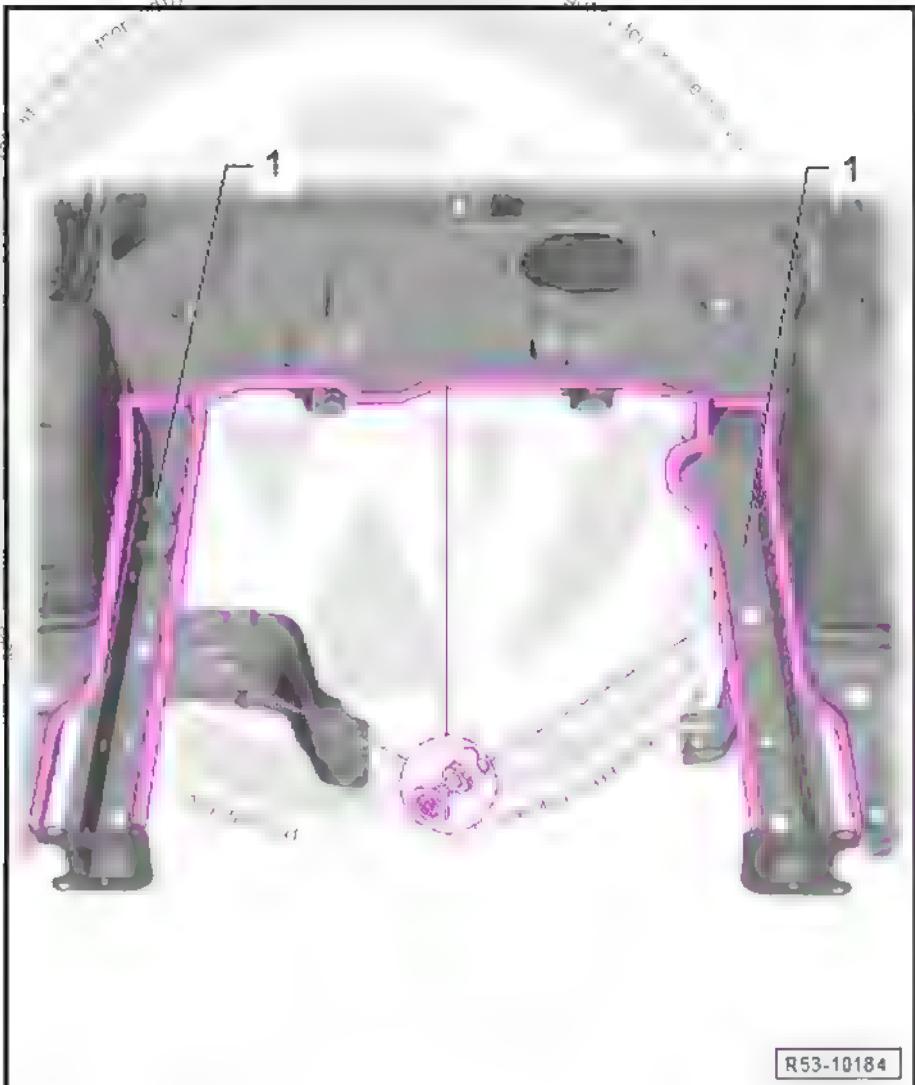
- Rear panel removed.



- 1 - Stuck area
- 2 - Towing hook
- 3 - Floor reinforcement



- Drill the original connection with the floor plate and with the right and left longitudinal members.
- Drill the floor reinforcement -3-.
- Drill the rear tow hook -2- from below and, if necessary, reuse.
- Remove the tow hook



- Remove plate residues.
- Remove all adhesive residues and sand the sticking surfaces until bare metal is visible.

17.3 Install



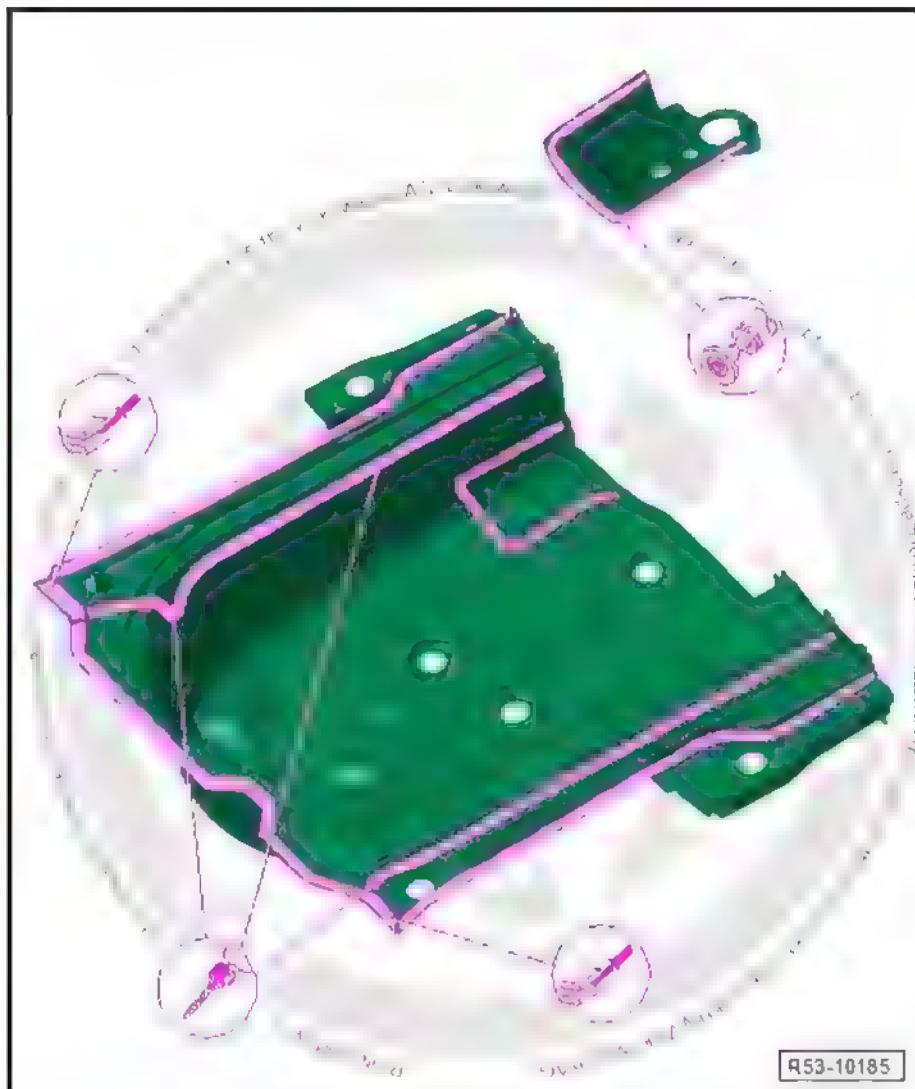
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 269](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ General Information, Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding

17.3.1 Prepare the new part

Replacement part

- ◆ Spare wheel housing
- ◆ 2K body adhesive - D 180 003 M2-



- Make holes for SG - hole fulfilment seam.
- Apply 2K Body adhesive - D 180 003 M2- on the adhesion area. 2 beads with \varnothing 3.5 mm.

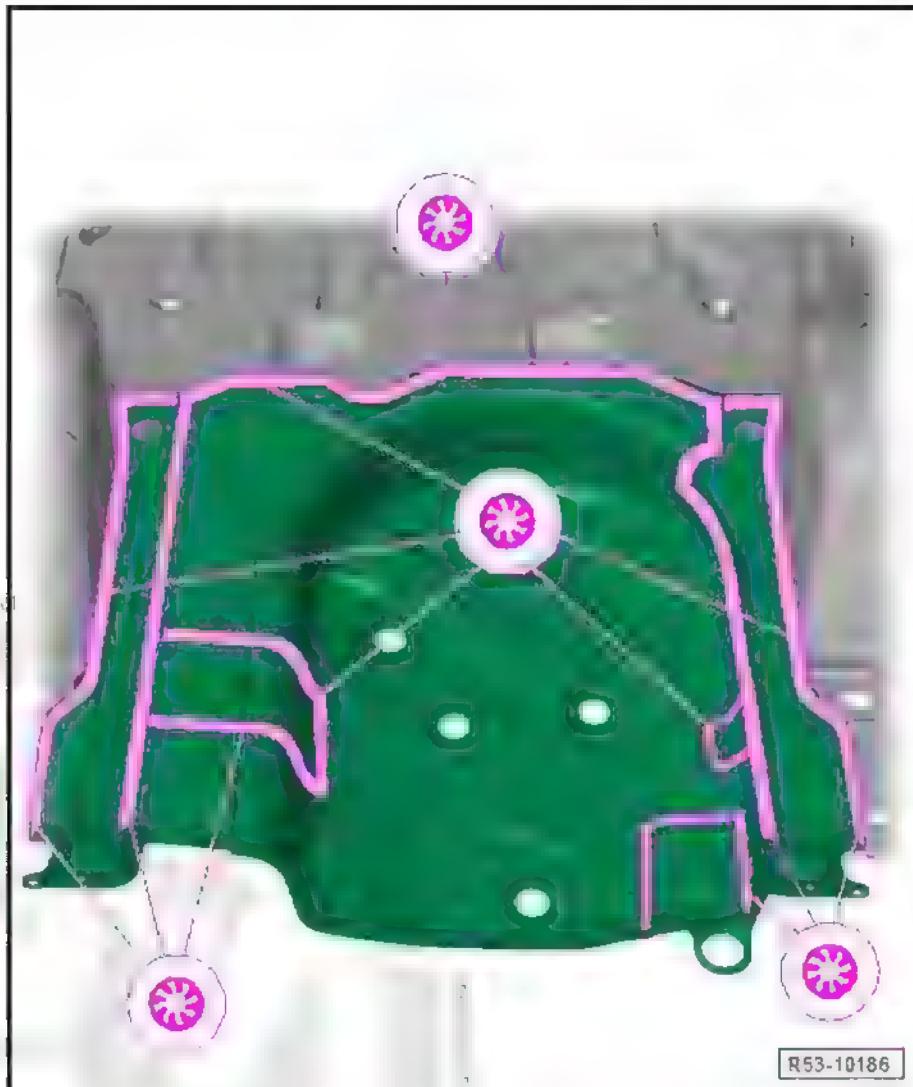


Note

The new part shall be welded within 30 minutes; otherwise, the adhesive action is nullified.

17.3.2 Welding

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with rear panel.



- Weld the spare wheel housing in the connection area with the floor plate, SG - hole fulfilment seam.
- Weld the floor reinforcement, SG - hole fulfilment seam.
- Weld the tow hook, SG - hole fulfilment seam.
- Weld the rear panel [⇒ page 203](#).



RO 53 80 55 52

18 Spare wheel housing (partial part) - replace



DANGER!

Follow the *safety instructions!*

⇒ General Information; Body Repairs, General Body Repairs ;
Safety Instructions

18.1 Tools

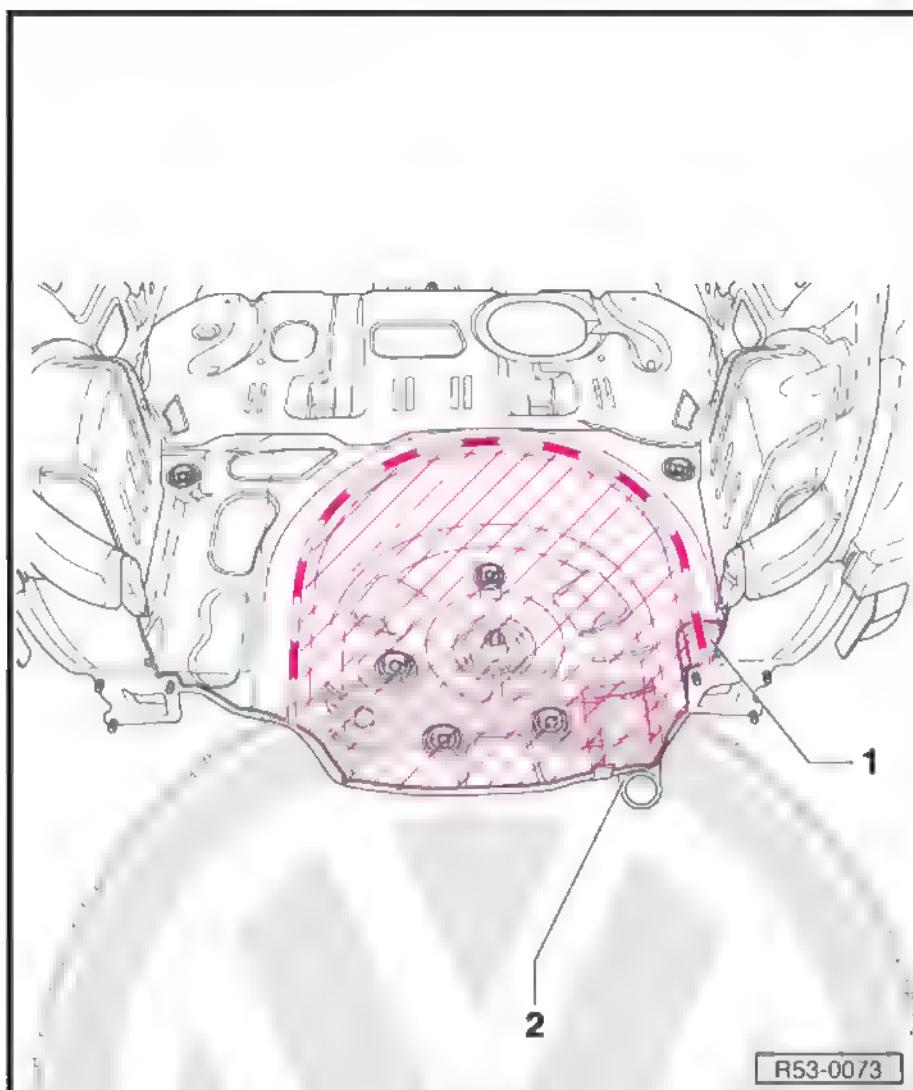


Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip.,
Manual for the Brazilian market or in the portal ⇒ Servicenet,
Workshop equipment, EH Catalogue, Workshop equipment,
Body and paint for the export market.

18.2 Remove

- Rear panel removed.



- Cut according to damage.
- Carry out cut so that the body side can be lowered; in this case you must consider an extra 15 mm of material for the overlapping.
- Drill right rear reinforcement -1- and right rear tow hook -2- and, if necessary, reuse.
- Undo plate connections with right longitudinal member.
- Remove plate residues.

18.3 Install



Note

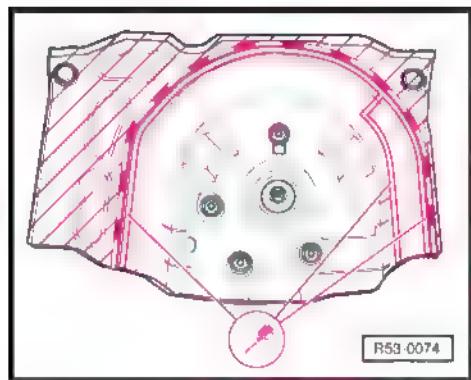
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
→ page 274.
- ◆ At smoothed areas, apply zinc-based conductive paint → General Information; Body Repairs, General Body Repairs ; Anti-corrosive protection measures - Anti-corrosive protection materials before welding



18.3.1 Prepare the new part

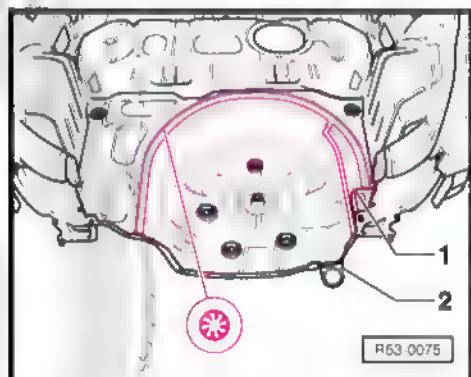
Replacement part

- ◆ Spare wheel housing
- Transfer cut to the new part and cut.
- Make holes for SG - hole fulfilment seam, distance between holes of approx. 20 mm.
- Lower on the body side.



18.3.2 Welding

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with rear panel.
- Weld spare wheel housing (partial part), SG - hole fulfilment seam.
- Weld other connections with right rear longitudinal member, SG - hole fulfilment seam.
- Weld right rear reinforcement -1- and tow hook -2-, SG - hole fulfilment seam.
- Weld tow hook [⇒ page 224](#).
- Weld the rear panel [⇒ page 198](#).





RO 53 80 55 52

19 Spare wheel housing (Spacefox - partial part) - replace



DANGER!

Follow the safety instructions!

⇒ General Information; Body Repairs, General Body Repairs ; Safety instructions

19.1 Tools

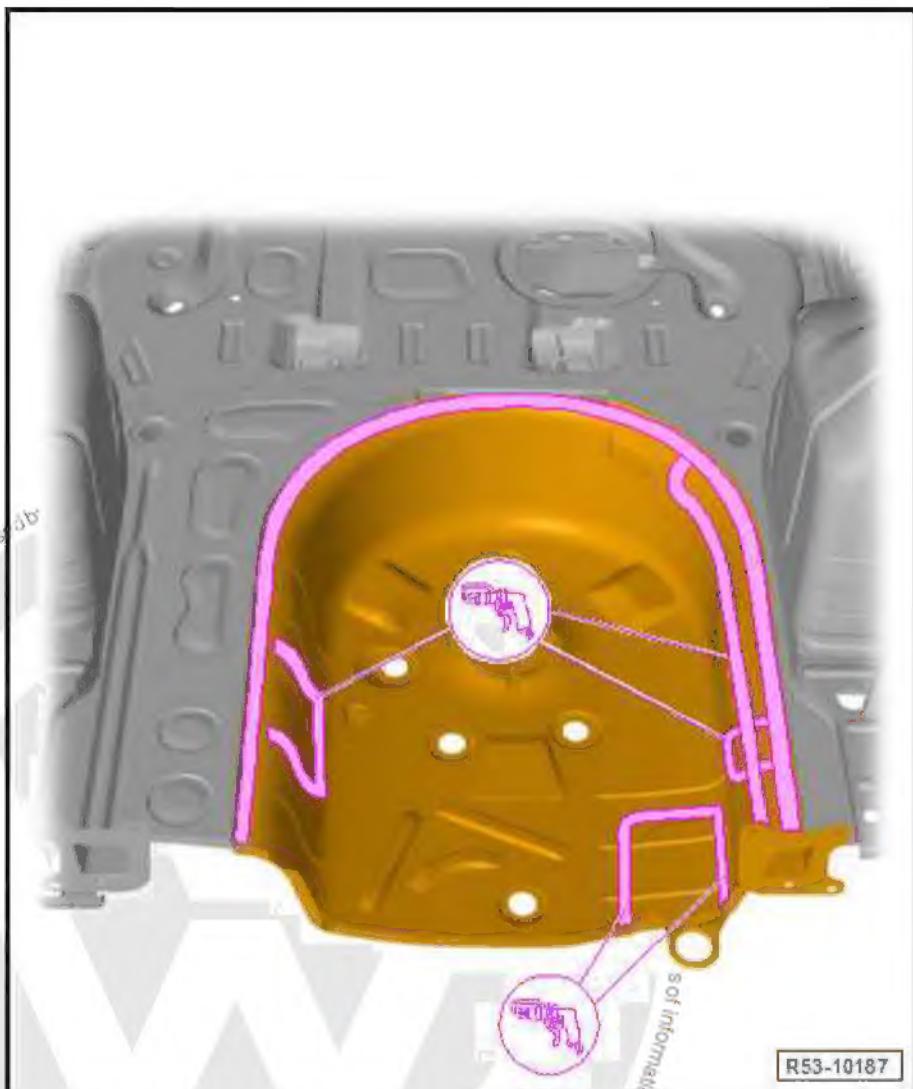


Note

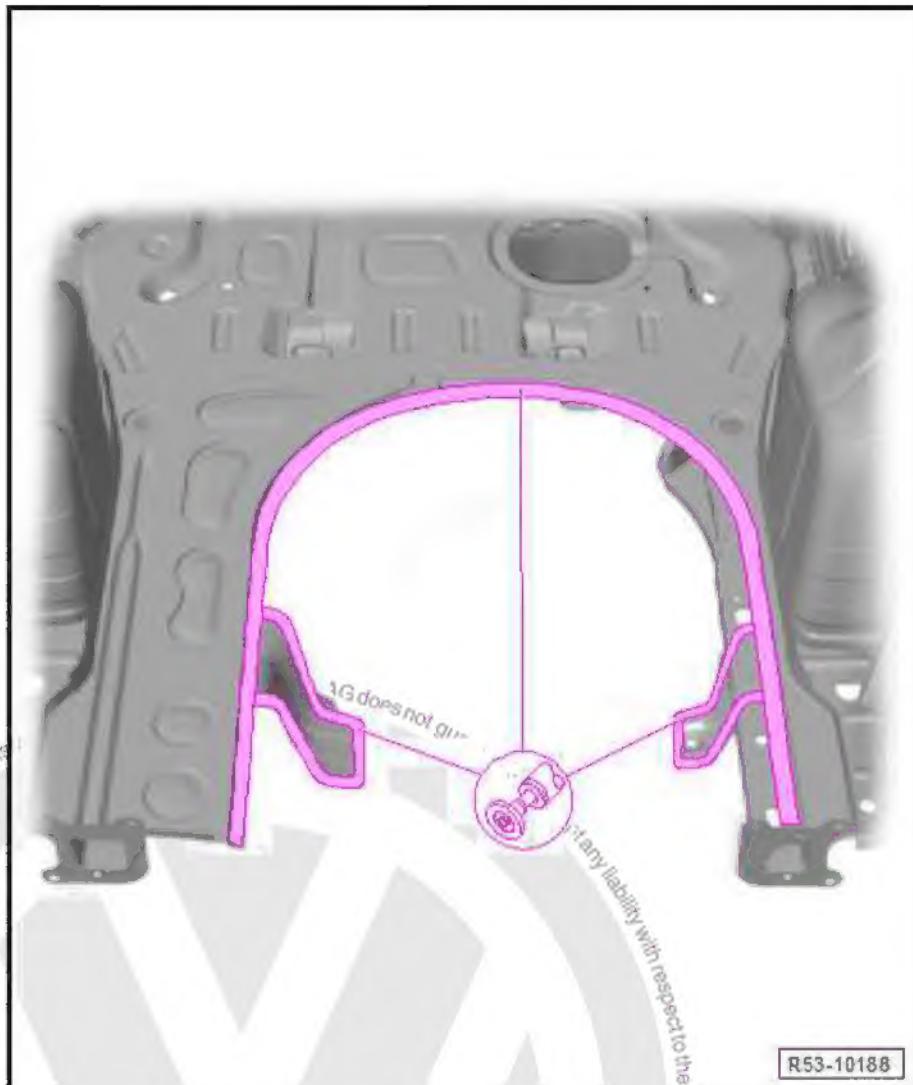
- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, welding equipment recommended by Volkswagen must be used for proper repair.
- ◆ Body cutting and welding equipment are available in the portal
⇒ Tech. Support, Sist. and Info. of Services. Tools and Equip., Manual for the Brazilian market or in the portal ⇒ Servicenet, Workshop equipment, EH Catalogue, Workshop equipment, Body and paint for the export market.

19.2 Remove

- Rear panel removed.



- Cut according to damage.
- Carry out cut so that the floor plate can be lowered; in this case you must consider an extra 15 mm of material for the overlapping.
- Drill the welding spots of floor reinforcements -1- and the rear right towing hook -2-.
- Undo plate connections with right longitudinal member.



- Remove plate residues.

19.3 Install



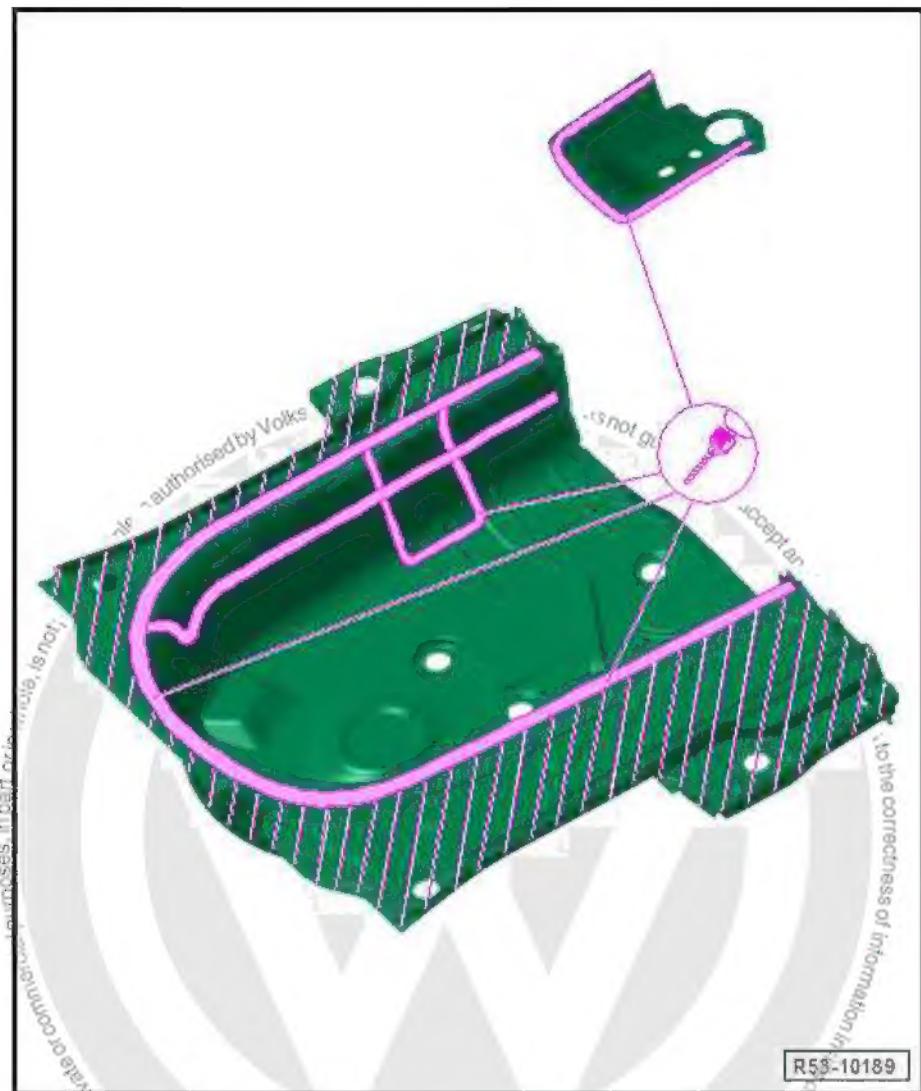
Note

- ◆ Due to the use of steels with physical characteristics, thicknesses and resistances different from the plate, appropriate welding equipment must be used for proper repair
⇒ [page 277](#).
- ◆ At smoothed areas, apply zinc-based conductive paint ⇒ [General Information; Body Repairs; General Body Repairs; Anti-corrosive protection measures - Anti-corrosive protection materials before welding](#)

19.3.1 Prepare the new part

Replacement part

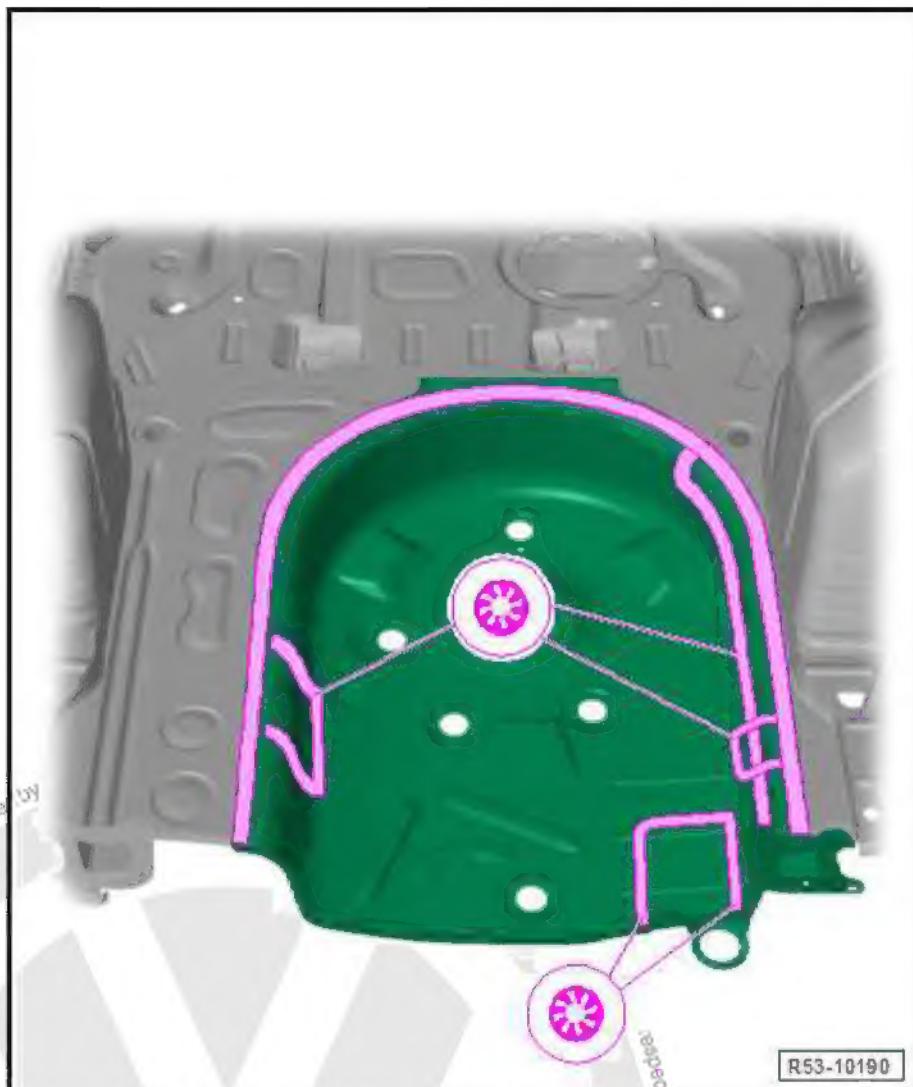
- ◆ Spare wheel housing
- Transfer cut to the new part and cut.



- Make holes for SG - hole fulfilment seam, distance between holes of approx. 20 mm.
- Lower on the body side.

19.3.2 Welding

- Adjust and fasten the new part with the vehicle on its wheels or on the alignment platform.
- Check adjustment with rear panel.
- Weld spare wheel housing (partial part), SG - hole fulfilment seam.
- Weld other connections with right rear longitudinal member, SG - hole fulfilment seam.
- Weld right rear reinforcement -1- and tow hook -2-, SG - hole fulfilment seam.



- Weld tow hook [page 222](#).
- Weld the rear panel [page 203](#).

Protected by copyright. Printing or prying for commercial purposes, in part or in whole, is not permitted unless authorised by the copyright holder. Information in this document is the property of Volkswagen AG.